

THE MEDICAL AND SURGICAL REPORTER.

No. 1840.

PHILADELPHIA, JUNE 4, 1892.

VOL. LXVI—No. 23.

Clinical Lectures.

**TRAUMATIC EPILEPSY; THIERSCH'S
METHOD OF SKIN GRAFTING; LIGA-
TURE OF THE FEMORAL AR-
TERY FOR POPLITEAL AN-
EURISM; ABSCESS OF
KIDNEY; CARCI-
NOMA OF THE
BREAST**

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TRAUMATIC EPILEPSY.

Gentlemen:—This is the patient who was operated upon last Saturday for an injury received on the head a number of years ago, and which was followed by epileptic attacks, occurring at irregular intervals, but increasing in severity, and without a previous history of epilepsy. I found a positive surgical indication in the condition of the surface of the skull, as there was a marked depression which I thought might involve the internal table. The operation consisted in exposing the affected area, and making two large openings in the skull, and connecting them by a rangeur. On enlarging this opening upwards subsequently, I found that the inner table was not affected, although the outer one showed very marked elevations and depressions, and considerable change in the structure of the bone. The bone was very firmly adherent to the dura mater, and was separated with considerable difficulty. The dura mater was then opened, and some adhesions found between the dura mater and the arachnoid. At the anterior part of the operating field, there was also a very distinct thickening and whitening of the arachnoid membrane between two convolutions, covering an area about half an inch in diameter, and beneath this,

there seemed to be an accumulation of fluid situated beneath a very thin layer of cortical substance. On cutting away this thickened arachnoid, however, and passing an instrument through the cortex a short distance, no fluid was found. The posterior part of the brain was perfectly normal in color, consistency, and pulsation, but the anterior part was flat and soft, and without pulsation. It was evident, therefore, that changes had taken place in the cortical tissue, probably due to small hæmorrhages on the surface of the brain at the time of the original injury, and that these had subsequently undergone softening. A small portion of the organ was removed from this situation, and subjected to microscopical examination; and in doing so, I had no hesitancy, for this part of the brain is practically unimportant, and I knew that I would not injure any motor function. The dura mater was then brought together, a small rubber drain inserted, and the skin flaps united by sutures. The patient has had a perfect week of convalescence, and the wound, as you see, is in excellent condition. So far, there have been no convulsions of any kind since the operation, and whereas, he had before the operation a dull expression, he now has a much brighter look, which has been noticed by others as well as by myself. This man has had before this intervals of many days in which he has been free from convulsive attacks of any kind, and hence, we cannot say yet how much good the operation has done him, but we must not forget that a sufficient lesion was found to account for his convulsions, and its removal would naturally lead us to expect a good result.

THIERSCH'S METHOD OF SKIN GRAFTING.

The next patient is the man upon whom I operated at the last clinic, and removed what I took to be a sarcomatous tumor

originating in a distinct traumatism. The injury was followed by a hematoma, and I believed that this underwent changes which converted it into a sarcoma. The operation which I performed, consisted in the complete removal of the sarcoma, which was fairly deeply situated, and closely attached to the deep fascia, and the wound was closed by grafts of skin applied according to Thiersch's method, the edges of the wound being stitched to the deep fascia to prevent undue motion of the parts. The wet dressings have been changed every forty-eight hours, as is my custom in these cases, and although there has been a little slipping of one of these grafts, the others have done extremely well. The wound has filled up level with the surrounding surface, and there is not the usual excavation we find in these cases of grafting. Had this one graft not slipped, the result would have been almost perfect. The change of dressing every forty-eight hours I have found sufficiently frequent, although Thiersch makes wet applications every four hours, night and day. The less frequent change of dressings I find yields just as good results, and is, of course, much less laborious. After about two weeks, we shall substitute a dry dressing, and perhaps then, some of the granulations will require to be stimulated with the actual cautery. This is the best application, nitrate of silver and similar caustics not seeming to act well upon the granulations. This method of skin grafting certainly has much to commend it when compared with the ordinary plastic operations. A few weeks ago, I operated upon a case where it was necessary to fill in a gap under the lower eyelid, measuring two inches laterally, by one inch in the vertical direction. If covering it by a plastic operation, it would have required a large flap from the cheek, or a drawing together of the sutures to such an extent as to cause eversion of the lid; but by this method of grafting, I was able to apply dry dressings in ten days.

EPITHELIOMA.

The third case is that of the old man with epithelioma involving about two-thirds of the lower lip, and associated with enlargement of the lymphatics under the jaw. He was operated upon, you will remember, one week ago, but he has not

done so well as the others. On the second day after the operation, he developed a high temperature with signs of pneumonia, and although he appears to be convalescent now, I did not consider it advisable to bring him up to the operating theatre to-day. A portion of the tissue has sloughed, probably as a result of the continued high fever, and it is likely that a secondary operation will be required.

LIGATION OF THE FEMORAL ARTERY.

Our first patient to-day, is a man, twenty-seven years of age, with a tumor in the left popliteal region of comparatively short duration, and of comparatively large size. He was not aware of its existence until six weeks ago, but it is probable that it has been there for a longer time. He says that he has had pain in this leg for a number of years, but I cannot say whether or not this has any connection with the present tumor. At present, there is a pulsating tumor occupying the whole of the popliteal space, having thin walls, and pulsating both laterally and vertically. This pulsation is entirely stopped by pressure on the femoral artery. A loud aneurismal bruit is heard over the whole of this tumor. The tumor shows a decided tendency to increase, and has already caused considerable pressure on the popliteal vein, as shown by the enlarged veins of the leg, and by its pressure on the nerves, it is causing considerable pain in the limb below the knee. This case, therefore, seems to be one demanding surgical interference. He gives no history of traumatism, or syphilis, although it is possible that there has been syphilitic degeneration of the arterial walls.

In reference to the treatment of this case, I have decided to ligate the artery above the aneurism, and at the site of election in the lower part of Scarpa's triangle. I have for the most part discarded the method of treating aneurisms by digital, or other method of compression, although my experience formerly with this method was quite satisfactory, five or six cases which I treated in this way, having all recovered. But, this was before we had so much confidence in antiseptic treatment of wounds, and I think that the attention of the profession was directed to digital compression chiefly from a desire to avoid a cutting operation. Digital compression

is a terribly laborious process, and one who has not attempted it can have but little idea of the hard work it entails. The best assistants cannot keep up the compression longer than about ten minutes at a time, and hence there must be a very frequent change of assistants both night and day. I have decided in this case, therefore, to adopt the method by ligation. My own experience with this method has been very satisfactory, as I have never had any accident or bad result, such as gangrene, follow the application of the ligature. I look upon this case, however, as one where there is reason to be a little anxious as to the final outcome, for the patient is very anæmic, and the interference with the venous return is considerable, so that it is possible that the shutting off of the vascular supply may lead to disagreeable consequences. Notwithstanding this risk, his condition is such that the operation seems to be eminently proper. There is a very slight pulsation in both the anterior and posterior tibial arteries, and you will see by the purplish discoloration of the feet, the amount of interference with the venous return.

The limb has been thoroughly cleansed first with soap and water, and then with turpentine, alcohol, and ether, so we are ready for the operation. I begin by making an incision which will freely expose the lower part of Scarpa's space. I wish to apply two ligatures here, for I desire to divide the vessels between them, so as to remove the tension. Having applied these ligatures, I now pass a director under the vessel, preparatory to dividing the artery. Upon dividing it, there is an immediate separation of one-quarter of an inch, and I find that pulsation in the vessel has entirely ceased. The wound is now closed with deep and superficial catgut sutures, and the usual antiseptic dressing applied, and the limb well wrapped up in cotton, and bandaged from the toes to the groin. The limb is next fastened to a long posterior splint with a foot-piece, the limb being slightly flexed, and the foot raised on a pillow, for I desire in every way possible to favor the circulation in the limb.

ABSCESS OF THE KIDNEY.

In this next case, I incline to the diagnosis of a tubercular suppurating kidney, but I must admit that there is hardly suf-

ficient grounds for a positive diagnosis. The patient is a delicate tubercular looking girl, twenty-three years of age, who says that some five years ago, she began to suffer from irritability of the bladder with frequent micturition and scanty urine, but that with this exception, she was in good health until about three months ago, when her general health began to fail rapidly, and she noticed at about the same time, a painful and tender point in the region of the right kidney, and this increased until the whole lumbar region became quite tender. She has had repeated chills, and considerable fever and night sweats. Four weeks after this tenderness was first noticed, she says there was a discharge of pus from the vagina, but we can obtain no history of bladder irritation at this time, and hence, I cannot say where the discharge came from; it may not have been pus. It occurred to me that this might have been a discharge of pus from a distended kidney, and that she thought it came from the vagina, when in reality, it came from the bladder. There was only very temporary relief following this discharge.

At present, she is feeble and anæmic, and has a large mass in the right loin, occupying the region of the kidney, which anteriorly and laterally feels quite firm, but posteriorly, over the region of the kidney, presents an area of fluctuation which probably indicates a considerable collection of pus. Judging from the history, it is difficult to state when this formation of pus began. The examination of the urine gives us no clue to her condition. It is found to be of a yellow color, and to contain only a few leucocytes and epithelial cells and granular matter, but it has a low specific gravity—1004. It contains no albumen, and is practically a normal urine. I am, therefore, in considerable doubt whether we have to deal with a long continued obstruction of the ureter due to a calculus or some other cause, thus causing obstruction of the pelvis of the kidney, or whether there is tubercular disease of the kidney which has finally broken down and produced this abscess. These are the two most important conditions, but I cannot exclude entirely from the history a sarcoma of the kidney, associated with a purulent collection. I hope that incision and drainage may restore the patient to a fair condition of health, for I think she

would hardly survive an operation as severe as extirpation of the kidney.

The first step in the operation is to ascertain with an exploring syringe whether or not there is pus present, for if this be a suppurating kidney or a perinephritic abscess, I should feel that a nephrotomy would be all that I ought to do for this patient, and if subsequently extirpation were called for, it could be done much more safely than now, and if malignant disease were present, I should still feel that the main point would be to employ measures directed towards stopping her chills and fevers, and sweating. This can be accomplished by draining any collection of pus which may be present. You see that the aspirating needle withdraws pus, and this seems to be so superficial that if it originated in the kidney, it must have long since escaped from the kidney tissue.

The patient being placed in the prone position, an incision was made in the loin, and immediately a thick stream of pus gushed out. My finger now passes into a large cavity measuring six or seven inches vertically. It extends up to the spine, and its anterior wall is composed of the mass already referred to. The portion of the tumor occupying the anterior part of the loin feels quite firm, but I should expect to find pus there also. The aspirating syringe, as you see, again withdraws pus, but it is in a small cavity, and a large part of this tumor is evidently quite solid. My finger now passes into a large abscess cavity in the upper part of the kidney itself. After thoroughly sponging out the wound, a number of punctures were made, but no pus found, and hence, it is most likely that the disease is chiefly confined to this upper part of the kidney. Looking upon the case as probably a tubercular one, one would expect several suppurating foci, but as such are not found, it seems better to content ourselves with draining those which have been found, rather than incising the surface of the kidney without a more positive indication for such interference. The cavity is now thoroughly irrigated with Thiersch's solution, and the inside of the cavity mopped out with a sponge well sprinkled with powdered iodoform. A packing of iodoform gauze, and a compress of the same material, with a broad bandage, completes the dressing. My object is to treat this case as though

there were only one abscess present, and if other foci develop later on, they will be treated in a similar manner.

CARCINOMA OF BREAST.

Our third patient is fifty years old, and she presents herself with a large tumor of the left breast, dating back for about two years, although the larger part of the growth has been noted only during the past four months. It involves more than one-third of the circumference of the breast; it has drawn the nipple slightly inward, and the skin is quite firmly attached to it over a considerable area, but is not attached to any extent to the deep fascia. There is one small spot of ulceration, and the mass has the true feel of a carcinoma. There is also enlargement of the axillary glands. The question arises, can this region be entirely covered by the skin of the neighboring parts, or must we resort to grafting? Although the skin is quite redundant here, and notwithstanding that a free incision will be required, it is quite probable that we may be able to close the wound by a flap of skin from the adjacent parts. The breast is included in a very long elliptical incision extending up into the axilla, and my assistants secure the vessels with clamps as the dissection proceeds. Having removed the breast, and cut open the tumor, you see that it is a typical carcinoma which has broken down in one or two places. We see now that this tumor was not attached to the underlying fascia. I find the glandular enlargement in the axilla so considerable that nothing but a complete removal of the contents of this region will prove satisfactory. As I remove these glands, and cut them open, you notice they present well marked evidence of being involved in the disease. I have cut with entire indifference as to whether I could cover the wound with flaps or not, as it is of the first importance to cut well beyond the diseased area, and it is a secondary consideration whether or not it will be necessary to resort to a plastic operation or to skin grafting. I find that there is still enough skin left to bring the flaps together so as to cover the greater part of the wound, but there is a small area which cannot be so covered without making undue traction upon the flaps, and therefore I shall close in this portion by Thiersch's method of

grafting. Before grafting, I shall introduce a number of interrupted sutures around the edge of the area to be grafted, and this step I consider quite important, as it not only diminishes slightly the size of the wound, but it fixes the edges. A portion of the patient's thigh having been thoroughly cleansed, an assistant makes the skin tense, while with a sharp razor, a long, thin, and broad strip of the skin is removed and transferred to the surface to be grafted. By the use of two broad instruments armed with teeth, the skin of the thigh is held tense, and at the same time flat, so that a long graft of nearly equal thickness throughout can be removed. If great attention be not paid both to the manner of holding these instruments, and to the position of the limb while cutting the graft, the surface of the thigh cannot be made flat, and consequently it will be impossible to remove even grafts of any considerable size. The grafts, as well as the surface from which they are removed, are kept wet with salt solution (6 per cent.) during the whole process of grafting, and the surface from which they are taken is dressed with rubber tissue and compresses wet with the same solution, and covered with cotton secured by a bandage. This dressing will not be removed for eight or nine days, and at the end of this time, the surface will be found entirely healed. When this dressing is used, the patient suffers no pain in the part from which the grafts were taken. The grafted portion of the wound is also covered with rubber tissue and compresses wet in the salt solution. The remaining portion of the wound has already been closed by interrupted catgut sutures. I have inserted a piece of rubber tissue through an opening in the axilla to facilitate drainage, as I find this answer in these cases fully as well as rubber tube. The operation is completed by applying the usual firm dressing of bichloride compresses and cotton. The dressings over the grafted portion will be changed every forty-eight hours, but the bichloride dressing will not be disturbed for a number of days.

I do not consider the prognosis in this case good, for the previous history, together with the amount of disease found at the operation, would lead us to expect a recurrence of the disease, but I hope that this may be postponed for eighteen months or two years.

ON THE ÆTIOLOGY OF IRITIS.

By PROFESSOR DE LAPERSONNE,
LILLE, FRANCE.

Gentlemen: Iritis has always been divided, from an ætiological point of view, into traumatic, syphilitic, rheumatic and other kinds. Putting aside the traumatic form which may be easily ascribed to an infectious external cause, I will speak to you about the ætiology of the so-called spontaneous, medical iritis, due to internal causes. Until recently, such have been termed dyscrasic iritis. The actual tendency, and of which I entirely approve, is to always consider the cause of iritis as an infectious one, and thus it may be said that iritis is the result of an infectious state. Though this proposition is easily demonstrable by a certain number of cases, it is far from being admitted by authors. If we adopt, from the start, the prevailing ideas about infection, it is seen that the field is admirably prepared for what is termed secondary infections. The iris, like all the uveal tract, is composed of an extremely rich vascular tissue, erectile, comparable to that of the lungs; the liver and the kidneys, and where diapedesis takes place readily; this diapedesis being probably one of the means of defence of the organism during the period of phagocytosis. A histological examination will reveal to us the existence of this diapedetic process at the beginning of an iritis. Again, it is well known that one of the means by which the organism rids itself of toxic substances is elimination carried on by the glands. You are familiar with the part played by the kidneys in this respect. Now, the uveal tract is a gland, a gland of the aqueous and vitreous humors, studied recently by Bouchard and especially by Nicati. Such is the field; let us examine the seed.

Clinical observation has for a long time permitted us to recognize the frequency of iritis in the infectious malady *par excellence*: syphilis. In this instance it is not necessary that the microbe be discovered. The proportion of these cases, although variable according to syphilographers and ophthalmologists, is quite considerable. On the other hand, the period for the appearance, and the gravity of the disease, depend on the degree of virulence. In malignant syphilis, the affection coincides

with the appearance of the roseola. You know how syphilis affects old individuals, and, in this respect, I will cite the case of an unfortunate countryman who came to our clinic, suffering from an intense gummous iritis. He still had upon the chin two chancres produced by the razor of a clumsy and careless barber; the body of the patient was covered with a confluent papulo-squamous eruption and numerous mucous patches. This man exhibited at the same time the primary, secondary and tertiary symptoms of syphilis, if we look upon the gummous affection of the iris as a tertiary manifestation of the constitutional disorder.

Iritis is of frequent occurrence in states manifestly infectious, such as tuberculosis and leprosy. Blenorrhagic iritis has been described, and there is no doubt, at present, that blenorrhagia is due to a general systematic infection. Still further: the frequent occurrence of iritis during the existence of intestinal disorders, has been attributed to a reflex infection. This subject is treated by Cohn in a recent work on the *Uterus und Auge*. A few months ago, in the *Semaine Medicale*, Wecker described metritic iritis as originating from a focus of infection in the female genital organs. Grandclement (*Soc. d' Oph.*, 1891) has referred to a special inflammation, an iritic uveitis, which the author attributes to a special microbe, and due to a poor elimination of organic waste by an insufficient renal action.

All these cases are rare, and constitute a small proportion among those producing iritis. After syphilis, the most frequent cause of iritis is rheumatism. Is rheumatism an infectious disorder? You know that this question is to-day discussed by authors and that some of these answer in the affirmative. Other writers (and they constitute the large majority), however, maintain that it remains to be established, especially in regard to acute rheumatism. Nevertheless, for one of the varieties of this affection, the answer is not doubtful. Such is the infectious pseudo-rheumatism of Bouchard, studied by Bourey in his thesis, and of which I, myself, have reported examples in one of my papers. This rheumatism may give rise to very intense iritic and iridocyclitic manifestations. I remember the wife of one of my colleagues, who, during convalescence from a serious attack of infectious rheumatism,

became afflicted with what may rightly be called lymphangitis of the eye-ball.

The objection that may be made is, that iritis is only produced during the articular attacks. On questioning patients, we may only find the signs of an arthritic temperament: a hereditary rheumatic or gouty history. Two years ago Hutchinson revived this question in the *Royal Society of London*. In his opinion, arthritic iritis is produced under the influence of two factors: the first, a hereditary one which in a special manner modifies the tissues; the second, a personal one—a climateric influence for the rheumatic form on the one hand, and on the other, errors of diet increasing the quantity of urates in the blood and tissues, for the gouty form.

In my opinion, there is another way of understanding the processes which are engaged in the production of iritis. I have frequently observed the co-existence of digestive troubles and the affection under consideration. Patients are often dyspeptic, and frequently suffer from dilatation of the stomach. One of the most interesting cases which I have seen is that of a woman who, for several months, was a victim of successive attacks of iridocyclitis. She was thin, exhibited a cachectic aspect, had bad teeth, and suffered from fetor of the breath. She had alternate attacks of constipation and diarrhoea, and was afflicted with a marked dilatation of the stomach, but there was no sign of neoplasm.

I made a careful, systematic study of this case, and I was delighted to observe an amelioration produced in the condition of the eyes by an appropriate treatment directed to the alimentary tract.

You have seen an interesting example at my clinic, in a patient suffering from repeated attacks of episcleritis with anterior irido-choroiditis. It is particularly upon these insidious relapsing forms of the disease that the influence of digestive troubles is most markedly observed. On questioning patients you will find a history of alternate periods of diarrhoea and ocular disorders, a condition which they will explain in their own manner.

You are familiar in a general way with the frequency of digestive troubles occurring in rheumatic, gouty and arthritic patients, even without the errors of diet insisted on by Hutchinson. If it is difficult to prove that the infectious agent is of a microbial origin, cannot it be admitted

that, under the influence of these alterations of the digestive tube, the septic products (ptomaines or toxalbumins) are reabsorbed and go to produce the special irritation which causes iritis? This is the hypothesis advanced regarding the production of certain inflammations of the skin, such as eczema or acne. It appears to me rational to admit that the same hypothesis may be resorted to when called upon to explain the production of iritis. Thus we may account for the periodical attacks, for the frequent relapses. It also explains the good effects obtained from intestinal revulsion, particularly after the use of calomel as advocated by English practitioners. Do not certain medicaments, like salicylate of sodium for instance, exercise an antiseptic action on the intestine?

The practical inference drawn from these facts is, that eliminating syphilis and the various infectious causes which have been enumerated, it is well to examine carefully the digestive tract, especially in cases of iritis with a tendency to relapses.

To the ordinary local treatment may be associated a well regulated diet, according to the precise indication advocated by Bouchard, and the employment of antiseptics such as salol, naphthol, iodoform and others.—Translated from *Le Bulletin Médical*, February 21, 1892.

CEREBRAL DISTURBANCES FOLLOWING INFLUENZA.

Mueller (*Berlin. Klin. Wochens.*, No. 37, 1890) reports the case of a man aged fifty, who after an attack of influenza presented a condition of great physical exhaustion. In a few weeks his mind seemed affected and he became somnolent, so much so, that he could be roused only with the greatest difficulty and then he would almost immediately fall asleep again. There was pain upon pressure over the vertebrae, the neck was rigid, the pulse was small and irregular, the skin reflexes were diminished and the tendon reflexes were absent. This condition lasted for about two weeks when he began to improve. He slept less and his mind became clear, but he had no recollection of what had occurred during the course of the disease. The reflexes returned to normal. The author thinks there was a cerebro-spinal meningitis similar to that seen after other infectious diseases.

Communications.

THE BLENDED TOCCI BROTHERS, OF LOCANA, ITALY.*

By ROBERT P. HARRIS, M. D.

PHILADELPHIA.

We have here a nude representation of what we must regard as the most remarkable duplex monstrosity that the world has seen since the death, three hundred years ago, of their Scotch analogue who had reached the age of twenty-eight years. This peculiar type of twins appears, on an average, twice in a century, as there have been about a dozen in the last six hundred years, and but two in the current century. The most remarkable feature about the Locana twins is that they are living and in good health at the age of fourteen and a half years, and bid fair to reach mature age, because of the perfection and independence of their thoracic and abdominal viscera. In the last six hundred years but two monstrosities of the same type have lived out their first year; and this early mortality we must attribute to a want of internal anatomical symmetry, and particularly to an abnormal construction of the heart and distribution of the blood-vessels in one twin. It is doubtful if unite twins are ever equals in mental and physical vigor, and the Tocci Brothers are as nearly alike in health and strength as has been the case in the subjects that have lived the longest.

The photograph before us represents the boys in a standing position, but it will be seen at once that they are mainly sustained in it by the use of their arms, and that this is more markedly the case with the left twin, whose shoulder is forced upward, because of the weak support given by his club-foot and imperfectly developed leg.

These twins were born in Piedmontese, Italy, on October 4, 1877, after a labor of eight hours, under a midwife, the head of the right boy, Giovanni, coming first; and he appears to have held that relative position, in a mental sense, ever since. Giacomo's head soon followed, and then came

*Dr. Harris brought to the notice of the College of Physicians an enlarged photograph of this remarkable monstrosity, which had been prepared for the Mutter Museum at the desire of its curator, and made the following remarks:

the double thorax, a single abdomen, one pair of legs, and a single placenta. Nothing was said about the cord, except that there was but one; but it was no doubt composed of six vessels—four arteries and two veins. The twins weighed $8\frac{3}{4}$ pounds when a month old, and probably a pound less at birth. When three years old, as shown by a photograph, they had shoulders, a corpulent abdomen, and, for their age, large testicles. Giovanni had a long face and a girl-like appearance, but his head-circumference has always been a little the larger of the two.

These xiphodidymi belong to the class that is distinguished by having two heads, four arms, and only two legs. In general outline they resemble, when their legs are together, a letter Y—the heads, shoulders, and chests down to the sixth ribs making the V, and the abdomen and legs the I, or stem. Their present weight is 95 pounds a healthy, robust boy of their age. Their arms, having much more exercise than their legs, are larger, in proportion to their age, than the latter; and the glutei muscles of Giacomo are badly developed, because of his talipes equino-varus, and consequent inability to develop them by exercise. Single boys of fourteen, as a rule, have much better developed legs than arms, which led to the expression in war times: "Better fitted for running away than handling a musket." But the Tocci boys are the reverse of this in strength.

If we had a back view of the monstrosity, it would show their two inner arms crossing each other over to their outer shoulders, in the position in which they usually hold them; two converging spinal sulci extending down to two sacra; two outer nates, as in a single subject; and two little rudimentary nates with a cleft between them, located over the intra sacral symphysis. They have no rudimentary nodule to represent an attempt at the formation of a third leg, as has been found in some analogues.

As they look at you, the two boys are quite different in facial contour, and Giovanni is generally credited with having the better mind; but their faces in profile bear a closer resemblance. They have fair skin, and at times a rosy color, and thick brown hair. Their bodies are short, and they are below the medium height, for their years. Their facial expression is not a happy one, when in repose, and reminded

me of what I have noticed in boys having deformed feet—a shame-faced look.

In measure of health the twins compare well with normal children of their own sex, having had but little sickness since birth, and not having lost a day therefrom since they commenced to exhibit themselves in the United States, six months ago.

Giovanni is the stronger and more erect of the two, has the better ear for music, learns a foreign language the more readily, and is generally the more intelligent of the two. He has a natural talent for drawing, and is devoted to making pictures of our domestic animals, such as the horse, cow, etc., and of some of the savage quadrupeds, as of the lion and tiger. Giacomo is the critic in art, although drawing but little, and his taste is for caricatures. The brothers converse a great deal together. They are both right-handed, although one might have supposed that Giacomo would have naturally preferred his free arm, the left.

The boys have each two lungs, the outer being the larger, and are forced to breathe largely by their diaphragms. They have separate and distinct hearts, located in the left chest-cavity respectively, and these hearts are believed to be normal in structure. Giovanni feels his heart beating on the left side—and if either boy has an abnormal cardiac structure, he should be the one—yet his color and health, indicate the contrary. The cardiac beats are not synchronous, and one heart generally pulsates a little quicker than the other.

They have two stomachs, and that of Giovanni is said to be reversed, the greater curvature being to the right, as was the case in Rita, of the Sassari girls of 1829. I was not permitted to verify this, because of the opposition of the father. These two stomachs are as independent functionally as if they occupied two different abdomens. Recently, when traveling by railroad, one of the boys became very pale, and directly vomited the contents of his stomach,* while the other was so entirely free from nausea that he laughed at his brother for his mishap. One brother may wake up hungry, drink a cup of coffee, and eat something while the other remains asleep. The two stomachs do not appear to be influenced in the least by being in

*This was repeated by Giacomo in public on April 23, 1892, at the Dime Museum, Philadelphia.

contact, but only by their respective pneumogastric nerves.

There are evidently two sets of intestines—large and small. One boy can have a desire to defecate when the other has not; and this is particularly the case when one has a diarrhoea, in which event he only has a discharge, while the other is passive. There must, therefore, be two colons, as were found on autopsy in the Padua boys of 1691. They have probably a common rectum, as had also the Padua analogue; but it is possible that this part of the bowel may be bifid, which would be an interesting feature to determine by touch or speculum. The twins, from habit and convenience, defecate almost always at the same time.

They have two bladders and one urethra, as had also the Padua boys, although they usually urinate together. As their tastes for food and desire for drink are not the same, one boy may be awakened from his sleep in the morning by a distended bladder and empty it without waking up the other, in whom the kidneys have been less active.

My catechetical examinations made last month confirm the opinions respecting the anatomy of the twins that were formed after auscultation, percussion, and a knowledge of their habits, by Drs. Fubini and Mosso, of Turin, in their second month, and by Drs. Colrat and Rebatal, of Lyons, in their thirteenth. The conjectural belief that they might have two colons has been changed into one of knowledge, as shown by their independence in defecation. In the event of an autopsy, these colons will no doubt be found of small calibre, and quite abnormal as to length and direction. We are warranted in this belief by discoveries that have already been made in the examination of dead analogues. Even the single colon of a double monster is quite abnormal.

The boys are quite differently affected by changes of temperature. Giovanni requires less underwear than his brother, and will perspire freely on a hot day, while Giacoma has a dry skin. Either brother may be seized with an attack of coryza, as the effect of a direct wind-draught, when the other entirely escapes. They sleep upon the back—or, more correctly, each is in a dorso-lateral position, and places the side or back of his head upon the pillow. They usually sleep eight or nine hours

continuously. For a change of position they sometimes turn over upon their abdomen for a short time, but never sleep in this form of decubitus.

A prick with a pin in the median line of union is felt by both brothers, but the sensation is lost to one twin in passing to either side. The penis is said to have a sensation common to each, and the scrotum has a partial one beyond the median line. It is claimed that one twin feels a little when his brother's testicle is touched, which I believe to be an error, the sense being in the skin only, as the testicles are supplied with nerves through the inguinal canal. The penis and testicles are in an undeveloped state, being small for their age. The penis becomes erect, but the boys have no knowledge of its sexual function.

The two legs are entirely independent, and each belongs to, and is controlled by, the boy whose head is on the same side. One boy does not feel a touch upon the other boy's leg, and has no power, by his will, to give it the least motion. It is possible that the twins might balance themselves so as to stand, as their Scotch analogue is said to have done, if the leg and foot of Giacoma were as well formed as those of Giovanni, and had the same degree of strength that the latter appears to have.

Whether the boys have two separate livers, or a double one with two gall-bladders, has not yet been ascertained, for want of permission to make the required examination. Having two bladders, they may have two pairs of vesiculæ seminales, but are more likely to have one to each bladder, with one vas deferens and one ejaculatory duct, as this would be in correspondence with the existence of one testicle to the owner of each bladder, and one urethra for the exit of the ducts. I find no reference to the seminal vesicles in any reports of autopsies made in male analogues.

With regard to other viscera, we can only form an inferential opinion, as follows: The spleens are small, and located right and left to correspond with the positions of the stomachs. The pancreases have their heads facing each other, to correspond with the curve of each duodenum. The kidneys are in two pairs, the outer being large and the inner being small, or, perhaps, rudimentary. It is rare to find

no trace of the two inner kidneys where the spinal columns are well separated so as to give space for them.

I see no reason why these Tocci boys may not live a number of years yet. Giovanni is the stronger, mentally and physically, but the difference is not much marked, and no special element of weakness likely to shorten life appears to have been discovered in Giacomo. They have both learned a certain measure of French and German, and can both sing, Giovanni having the higher-pitched voice. One of the Scotch twins, already mentioned as having reached the age of twenty-eight, is recorded as having been quite stupid when compared to his brother. We have no such difference to record here.

NERVE STRETCHING IN THE TREATMENT OF PERFORATING ULCER.

Dr. McLeod in the last number of the *Indian Medical Gazette* records the notes of an interesting case of nerve stretching for anæsthesia and perforating ulcer in which considerable benefit had resulted. The patient was a Brahmin, aged about 40, who on admission into hospital stated that about a year ago he suddenly lost sensation in the toes of the left foot. Two months subsequently to this he sustained a wound of the sole of the same foot, opposite the first and second toes, which became sloughy and refused to heal. On admission a deep sloughing sore on the ball of the foot about the size of a rupee was present. The three inner toes were dusky and swollen, and a small unhealthy looking ulcer existed on the inner side of the second toe. The whole of the dorsum of the foot was completely anæsthetic and the anterior third of the sole. The anæsthetic area extended from the anterior aspect of the leg as far as its middle-third. The external popliteal and musculo-cutaneous nerves were found to be thickened. After giving a fair trial to art and antiseptic dressing without effect, these nerves were cut down upon and stretched. The wounds healed by first intention, and the following results have been obtained:—1st. Recovery of sensation over the anæsthetic area—the feeling is somewhat duller than normal, but there has been an undoubted restoration. 2d. Rapid cicatrisation of the ulcers. 3d. Subsidence of the swelling and restoration of the skin to its normal appearance and texture.—*Med. Press*

WATER AS A THERAPEUTIC AGENT AND ITS VALUE AS AN ELIMINANT.*

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In presenting this brief paper to the Pathological Society, I wish to remark in advance that I have made no attempt to say anything new; I only seek to invite from members criticism and suggestion in regard to the employment of a therapeutic agent with which you are all familiar, yet the value of which I believe that few, if any, of us fully appreciate.

For the most part nature does her work in a very simple fashion. All general laws are simple laws, and the general law of medicine is *regular nutrition*. Perfect health is perfect nutrition, but nutrition cannot be perfect unless there is complete elimination, a thorough carrying off of all products of tissue change. This is one of its essential conditions. But if health is perfect nutrition, then disease, general or local, must be impaired or perverted nutrition. And I believe that in a vast majority of cases it will be found, that the first stage of impairment of nutrition is faulty elimination. Dead material must be removed from tissue to make place for the living. It is not enough that we introduce nutritive elements into the blood, the tissues must also be in condition to appropriate the nutritive material offered them. It is a law of physics that two bodies cannot occupy the same space at the same time. The tissues cannot receive a due supply of nutritive matter until waste matter has been duly washed out of them. Tissue filth must make place for tissue food. The more thoroughly this is done the more actively can repair go forward. Water is the agent by which this important work is accomplished. It is the universal solvent, and to do its work thoroughly the solvent must be in *amount sufficient* to dissolve the material presented to it for solution. So far as the intent of this paper is concerned we may of course regard an emulsion as a solution.

Now the more rapidly combustion goes forward, the more rapidly must its products accumulate in the system, the greater will be the amount of water re-

*Read before the Chicago Pathological Society.

quired to dissolve and carry them off, and the more important it will be that an extra amount of water should be introduced into the circulation. If the oxidized products of the high temperature in typhoid or scarlatina could be carried off as rapidly as formed, the gravity of these diseases would be greatly lessened.

Although this paper professes to deal only with water as an eliminant, it may not be altogether out of place to refer to the methods by which the amount of water required may be lessened, that is, to those methods by which temperature may be kept down, combustion rendered less active, and its products less in amount. Here we have the application of cold, the use of modern antipyretic medicines, calomel, and that most powerful antipyretic of all, blood letting, which Dr. Gross mourns as a lost art. I am old fashioned to believe that this is the only rational treatment for pneumonia, and I do not believe the time far distant when this will again be the standard treatment in the first stage of this grave disease.

But use what methods we may to control temperature, there must in all inflammatory diseases be an abnormal amount of tissue change, and as a consequence an increased amount of water will be required to carry off the products of such change. In the olden time, when water was forbidden in fevers, the then high mortality from fevers would have been higher still but for the amount of water given with the medicines and as medicine. The doctors were really doing a right thing, but in a very disagreeable way, and without knowing what the right thing was that they were doing. Now we recognize the fact that in many cases the real medicine, the actual therapeutic agent, was the water, and we do not think it necessary at this time to give water in some repulsive decoction.

When I first entered upon the practice of medicine, hydropathy was at its flood tide of popularity, and I could not but know of some good work done by it. Wood, in his practice of medicine, refers to the success of the measures of hydropathists in chronic rheumatism, but these measures were often carried to excess, and it was so obviously unreasonable to employ one therapeutic agent to the exclusion of all others, that hydropathy pure and simple, gradually lost ground. But long before the time of Presnitz, indeed from

the very infancy of medicine, the therapeutic value of water had been distinctly recognized by some of the closest observers, though probably none of the old observers knew how it did its work. The good effects of the various medicinal springs, shown so unmistakably in very many cases, come not alone from the rest and change enjoyed by the visitors at such places, still less from the salts which these waters contain, but from the very large quantity of the water drunk, supplying in sufficient amount the solvent necessary to take up and carry off from the system the accumulated products of oxidation. The salts may do, and often doubtless really do some good, but the chief benefit, I believe, is always due to the pure protoxide of hydrogen itself. Even in anæmia, where ferruginous waters are employed, the benefit gained is not due to the *iron* alone, but also to the elimination of the oxidized or *partially* oxidized products that have accumulated in the system.

And here we come upon another physiological fact connected with elimination, that should never for a moment be lost sight of. Products completely oxidized are much more soluble than the products of partial oxidation, urea much more soluble than uric acid and its salts, consequently while a moderate amount of water may suffice to remove perfectly oxidized waste, a very much larger quantity will be needed to dissolve and carry off the products of partial oxidation. Here we must employ forced elimination if we would do good work. Wherever oxidation is perfect we have water eliminated by the lungs and urea by the kidneys, but if the combustion has been imperfect, we shall have the uric acid salts present, and wherever this is the case our line of work will be pretty clearly marked out for us. For this reason in all inflammatory conditions the character of the urine should be carefully noted. It will not be out of place to say here, that I have for years been more and more strongly impressed with the fact that much of the sickness among young children is due to an insufficient supply of water. Few mothers ever think of giving a feverish fretful babe a little water, but put it to the breast instead.

In the case of "bottle babies" the thing is as bad or worse. I have more than once been surprised at the improvement that I have seen take place in ailing babies sim-

ply by giving them their food at regular intervals, and giving them a little water between times. As a rule the child's digestion will improve at once, and this improvement will be due not alone to the fact that the child is getting less food, and getting it at regular intervals, but also to the fact that more perfect elimination has been established. The water also quiets and satisfies the child, and makes regular feeding possible.

But the more especial purpose of this paper is to suggest the help we may have from water in the treatment of acute rheumatism, and of the more virulent poisons of scarlatina and diphtheria. For the first twenty or twenty-five years of my practice my experience with rheumatism was unsatisfactory enough. Sometimes patients would get along as well as I could wish, but I had the discomfort all the while of feeling that I did not know whether it was my treatment that was benefitting them, or whether they might not have got along just as well without me. Then I felt that I could never even guess at the length of time a rheumatic attack was likely to continue, and was haunted by the fear of valvular heart lesion as a possible result. I think I was reasonably well posted in the literature of rheumatism, and tried, and tried faithfully the then most approved methods of treatment.

It was not, however, until after I had learned the importance of thorough elimination and especially the value, of water as an eliminant, that I began to be at all satisfied with my results. I learned the value of blue mass and of podophyllin, as I had gained from these, results more prompt and decided than I had secured in any other way, but I soon learned too that something more than these was needed to maintain for a sufficient length of time the elimination necessary. I was disgusted with trying to neutralize the poison, whatever it might be, and was convinced that it must be washed out of the system. This was about the way I felt when salicylic acid was proposed as a remedy, and I tested it from the first, but almost from the first used it in connection with large draughts of water. I feel now as if we had finally developed a rational and effective treatment for rheumatism—a treatment upon which we can rely almost as confidently as we can upon sulphur to cure the itch. Indeed, I am compelled to con-

fess, that in the treatment of rheumatism I have become almost a simple routinist. In every case, or nearly every case, my first step is to secure free catharsis, giving almost invariably some mercurial purgative, blue mass with podophyllin, or if much fever is present, calomel with soda and rhubarb. This is to be taken at bed time, and in the morning after the purgative has acted, I begin the use of salicylate of soda, with copious draughts of hot water. I give a 10 or 12 grain dose of the salicylate, with a large draught of hot water, every half hour till 6 or 8 doses have been taken, or until the stomach refuses more water. The patient should, of course, be in bed warmly covered. In a very short time, almost invariably within an hour, the patient will be in most profuse perspiration, drenched in his own sweat, as if he had been dipped into a bath tub, and this sweating will usually continue two, three or four hours after the last dose of the salicylate has been given. But a noteworthy fact in this connection is, that the patient is rarely exhausted by this profuse and continued perspiration. The sense of relief is usually so marked that the patient will not only feel no exhaustion, but will not unfrequently say, that he feels actually stronger. This, however, is not always the case, though I do not remember ever to have met with a case of extreme exhaustion.

This sweating process is usually to be repeated on the second and third day, though it will, as a rule, be sufficient to give the salicylate and hot water every hour for three or four hours, instead of every half hour as on the first day. I might add, that it is often well to put a little lemon juice into the water, or to give it as a cup of tea, if the patient rebels against plain water. This treatment will, in a very large majority of cases of acute rheumatism, be found entirely successful, though the course may sometimes need to be repeated.

In inflammatory attacks occurring with patients of special rheumatic diathesis, or suffering from chronic rheumatism, this treatment is, as might be expected, less successful, but even in these cases it often gives a very marked relief. In these cases, however, we must never forget to give the liver due attention. Where it becomes necessary to make use of iodide of potassium this remedy also should be given with

abundant draughts of water, though it may be impracticable to keep the patient in bed or to use water freely enough to cause perspiration. The water however promotes the action of the iodide upon the kidneys and thereby effectively aids elimination. It may be well to add here that for the last two or three years I have adopted a similar treatment in quinsy. The idea, I believe, originated with Dr. Knox, who suggested the use of salicylate of soda. I have no means of knowing how far the salicylate of soda, or how far the water may have to do with my results. I only know that this treatment has been far more satisfactory than the treatment I had heretofore followed, and that since adopting it I do not remember to have had a single case of tonsillitis resulting in abscess, and the attack is usually promptly aborted. But although water, as I have suggested, is one of our most effective remedies in rheumatism, its use is by no means limited to this harmful affection.

In diphtheria and scarlet fever it is one of the most valuable if not the most valuable of all therapeutic agents. Perhaps the same is true in all self-limited fevers due to a specific poison. When, if ever, antidotes shall be discovered capable of neutralizing these poisons water may cease to have less relative importance in their treatment, but so long as we have to get rid of these poisons by elimination, water must continue to hold its place as a remedy of the first rank. It is in diphtheria that I have made the most thorough test of the therapeutic value of water. In treating this disease I keep two special objects constantly in mind. *Local disinfection* and *general elimination*. I seek from the first to prevent by any means in my power, any increased accumulations of the poison in the patient's system. I give calomel at the outset, stop all food, especially all *nitrogenized* food as I do not wish to add to the already overwhelming amount of work awaiting the kidneys, and from the first dose of the mercurial begin the free use of water. After the calomel has acted, I frequently begin the use of salicylate of soda, but all the while with the free, *very free* use of water. If from the severity of the throat lesion, the child has difficulty in swallowing or refuses to take water, then I give enema of warm water every hour at the least, giving all that I think the child can possibly retain, and directing the

nurse after each enema to maintain pressure upon the anus to secure retention of the water.

At the same time that I am doing this, I try to effect local disinfection by the free use of peroxide of hydrogen. This agent while a powerful oxidizer, a most efficient disinfectant, has the great advantage of not being poisonous or not acting but in a very slight degree upon living tissues. For this reason its employment may be almost continuous, by frequent gargling where the patient will use a gargle or with the atomizer when the child is too young or too perverse to gargle. It should be used at the least as often as once an hour, not only to the throat but in the nares also if necessary. It is hardly necessary to suggest that in consequence of the oxidizing properties of the peroxide, atomizers with metal tubes should not be used.

If the membrane be very dense and fails to separate under the action of the peroxide, other means for its removal may be employed to the end that the disinfecting action of the peroxide may be more effective. Exception may possibly be taken to what I have said in the matter of withholding food in the early treatment of diphtheria. It may be said that the patient must have food to keep up his strength, but it is to be borne in mind that the debility in early diphtheria is not the debility of exhaustion, but the debility resulting from the action of a depressing poison, and we do not relieve the debility by increasing the quantity of waste products in the system, the volume of the depressing poison. No, our work from the first must be elimination—elimination the more thorough the better, and after we are satisfied that we have the disease so far under control that the poison is not only not gaining on us, but that we are removing it faster than it is forming, then we can consider the question of food. If the child desires food, he can have it in moderation, or later on if there is a danger of true exhaustion, food and stimulants can be pressed.

I have no wish to weary this Society with the clinical history of individual cases, but I would like to refer to three cases in one family which came under my care last week. All were severe, and one of them at least seemed malignant in type—high fever, dullness, great depression and apparent invasion of the nares by the

diphtheritic inflammation. In this case—A boy nine years old, I gave three powders with a grain of calomel and two of soda in each powder, giving one powder every two hours, with all the warm water the child could be made to drink. Fortunately he could be made to drink freely. He was in a free perspiration before the calomel acted and after catharsis had taken place he appeared decidedly better. The following morning—5-grain doses of salicylate of soda every hour, still with hot water, till he was again sweating freely, all this while also using the peroxide freely in throat and nares. The other two cases were treated similarly, but less heroically, and all are now doing well, appearing, in fact, like cases of a mild type. I should add here, that a day or two after this paper was read, one of these little patients, the one whose case at the outset seemed most promising, died very suddenly from strangulation, apparently from closure of the larynx by a flap of dense partially detached membrane. I have little doubt that if any one had been at hand to render prompt aid, this result might have been averted.

Since adopting this general plan of treatment, a little over three years ago, though I have not till lately been using salicylate of soda, I have treated between 40 and 50 cases of true diphtheria, and have lost three cases. In one of these cases, a child, four years old, was recovering from whooping cough. The lungs were still very weak and a diphtheritic bronchitis developed, extending through both lungs. In the second case it was impossible to secure anything like faithful and intelligent co-operation on the part of the parents, and in the third case, that of a boy six or seven years old, who had never been taught to mind, and who from the first would permit nothing to be done for him without a fight, continued till he was exhausted. When finally the disease seemed broken, when the membrane had wholly disappeared from the throat, when to all appearance an ordinary child would have been out of danger, this youngster from sheer ugliness, or a perverse unwillingness to do anything that he thought he was wanted to do, refused food, stimulants and even water, fighting for all he was worth when any attempt was made to force anything on him, till he ultimately succumbed to heart failure, the result of sheer exhaus-

tion. I have no doubt that a little brandy and water willingly taken would have saved him. This is certainly a better record than I could have shown in the earlier years of my practice, when I crowded food, used iron, chlorate of potash, quinine, etc., etc. I did this for thirty-five years, not because I was entirely satisfied with the treatment—for I could not be—but because it was the usual treatment and I could think of nothing better.

I wish here to say that I am not prepared specially, to advocate the use of salicylate of soda, as I do not know how far the good results in cases where I have used it, were due to this salt, and how far to the water simply. This much however I do know, there is no other remedy under heaven that I would use to the exclusion of the free use of water.

I wish here again to emphasize what I have already said in regard to food, especially nitrogenized food in the early stage of diphtheria. It seems to me self-evident that the introduction of food into the stomach must have one of two injurious results—either it remains in the stomach undigested, or if taken into the circulation, must add its oxidation to the volume of waste matter to be discharged by the already overworked kidneys and so add greatly to the danger of the disease. Of course in the more advanced stage of diphtheria or in any protracted fever we must give food, but not in the early stage or while a high temperature is present.

Before leaving the subject of water in diphtheria, I wish to refer to one case where I feel confident that the use of water by the bowel saved the patient's life. It was a case that was under the care of my son and myself in the early part of the present summer, where intubation had been performed by Dr. Waltham when it was evident that without it the patient, a child between two and three years of age, could have lived, but a few hours. The operation, most skillfully performed, gave immediate and great relief so far as the breathing was concerned, but still the child grew worse. The child could of course take a limited amount of water by the mouth, the urine became more and more albuminous, and finally the kidneys ceased acting altogether, and for thirty-six hours no urine was discharged. But all this time we persevered in the use of water by the bowel, until finally the kid-

neys resumed their work, copious diuresis ensued, and the child continued to gain steadily and quite rapidly in most respects, although we had a diphtheritic paralysis of the lower limbs that lasted six or eight weeks. I had never before witnessed recovery in so severe a case.

In scarlatina we may have a pathological condition closely analogous to that here described in diphtheria, a condition where free elimination alone can save the patient's life. Here our remedy is water, water by the mouth or water by the bowel, as the case may be, but water all the time. I have had it objected to this treatment that it is dangerous thus to crowd the kidneys, that they will be exhausted and cease to act, but the congestion of the kidneys in these cases is not due to the amount, but to the kind of work they have to do; it is due to the excessive amount of poisonous material passing through them, and the more concentrated this poison, the more irritating will its action upon the kidneys be. Our safety, then, is in diluting it. It is a good deal easier to pass a quart of molasses and a gallon of water mixed through filter paper than to pass the molasses alone, and the urine in this case is not only dense, but acrid and poisonous. So I say again, our safety is in diluting it. I believe that many lives have been and are being lost from an inadequate appreciation of this fact. I certainly can recall more than one case in my own practice where I believe that I might have saved a patient's life had I understood the action of water then as well as I think I understand it now.

I have already, in the early part of this paper, alluded to methods of controlling temperature so that we may control also the volume of the oxidized waste that must be carried off. Obviously elimination cannot be crowded beyond a certain limit, and the saving of the patient's life may depend upon our so far controlling temperature, controlling oxidation, as to keep the volume of resulting waste within this limit. This is a matter of which we should never for a moment lose sight.

It would be interesting to study the action of water as an eliminant in some diseases other than those I have thus far named, but this paper is already longer than I had intended, and I will no longer trespass upon the patience of the Society.

A CASE OF SURGERY OF THE LIVER.*

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The comparative rarity or perhaps the want of recognition of hydatid cysts of the convex surface of the liver, and the additional fact that only very incomplete descriptions of them are to be found in the many valuable works on surgery published in this country, have prompted me in presenting a few clinical notes on the subject.

The following case is of interest to the physician as well as to the surgeon, not only on account of its diagnostic features, but as illustrating the value of the radical treatment advocated of late by the surgeons of Australia and France:

The notes of the case are as follows:

M. B., aged 29, native of France, a sheepherder for the past four years. No hereditary or personal antecedents of importance. No history of impaludism, dysentery or syphilis.

During the summer of 1888, he began to complain of very severe pain in the region of the liver and in the right shoulder, greatly intensified when reposing on the corresponding side. Occasional attacks of coughing and dyspnoea were also referred to. Large and repeated blisters were prescribed by the physician who examined him at that period. The preceding symptoms increased gradually in intensity, incapacitating him for any constant or hard labor.

November 16, 1890, he entered my ward in the French Hospital, complaining of dyspnoea, a sense of tension in the right side and a severe dry cough.

Examination.—On inspection, considerable distension was noticed in the right costo-diaphragmatic region, with diminished motion during respiration. Careful mensuration showed a difference of three inches in favor of the right side.

Palpation and percussion demonstrated the absence of vocal fremitus and the presence of great tension and well defined dullness in an area extending posteriorly as high as the sixth rib, laterally to the level

* Read before the State Medical Society of California.

of the fourth rib and anteriorly obliquely downwards to the lower third of the sternum, the upper limit of dullness being represented by a convex line. The anterior border of the liver appeared regular, occupying a line parallel to and one and a half inches below the tenth rib.

Auscultation showed suppression of respiratory murmur in an area corresponding very much to the one just described. Above this area the respiration was weak as compared with the murmur on the opposite side. Slight friction sounds were detected in a space corresponding to the right costo-diaphragmatic pleural cul-de-sac.

The results furnished by percussion and auscultation did not vary with the numerous different positions given the patient during the examination and very little if at all through respiration. Heart normal, slightly deviated to the right. Examination of urine negative. Temperature normal, pulse 84, respiration 26. Patient weighed 140 lbs., having lost 15 lbs. during the previous six months. General condition poor.

A diagnosis of hydatid cyst of the convex surface of the liver was made and aspiration advised.

December 24th, after having thoroughly cleansed and disinfected the skin I aspirated with a Dieulafoy needle (No. 2) choosing the sixth intercostal space, in the anterior axillary line. About five litres of a clear, transparent, non-albuminous liquid were evacuated. It contained traces of sugar and had a specific gravity of 1010. (The first few microscopical specimens showed no traces of either scolices or hooklets, but some of the latter were finally found after allowing the liquid to deposit for several hours.) The patient's condition was immediately rendered much more comfortable, but improvement was of very short duration; on the sixth day the patient had a well pronounced rigor followed by hyperthermia. Percussion gave evidence of re-accumulation of liquid and the nocturnal temperature showed an exacerbation of 3° , pulse 116, respiration 28. Complete anorexia.

Radical interference was clearly indicated. Preference was given the pleura-diaphragmatic route rather than the peritoneal route, (1) in order to explore the pleural cavity and ascertain if it had been infected by the suppurating cyst; (2) to

obtain the maximum space possible in view of a radical operation.

Operation: January 1st, 1891.—Assisted by my excellent interne, Dr. Borda, I incised the sixth intercostal space, five inches in length, slightly in front of the axillary line. After resecting, by the subperiosteal method, two inches of the sixth and seventh ribs, the pleural cavity was opened and found to contain about two ounces of a serous liquid in which ulterior microscopical examination showed numerous leucocytes. The lung was apparently collapsed and retracted against the vertebral column. After shutting off the pleural cavity as well as possible by means of a large sponge, the diaphragm and the subjacent cyst were incised and three litres of pus evacuated together with remnants of numerous daughter cysts. The cavity was then irrigated with a 1/3000 solution of bichloride of mercury. Gradual traction enabled me to remove the cyst *en masse* without causing any hæmorrhage. The remaining cavity was then explored by the introduction of the entire hand. At a point two inches to the right of the xiphoid appendix, I noticed something doubtful, perhaps a second cyst, about the size of a goose egg, surrounded by apparently normal hepatic tissue. Owing to its great depth and doubtful nature I decided to let it alone, a grave mistake as the evolution of the case clearly demonstrated afterwards. The cavity was finally washed out and two large drainage tubes inserted. I succeeded in partially excluding the pleural cavity by approximating and suturing the costal and diaphragmatic pleural surfaces above the incision intersecting the diaphragm and introducing a small drainage tube as a precaution.

Two-thirds of the external wounds were closed by silk sutures and a dry sublimate dressing applied.

Duration of operation, one hour and twenty minutes. The immediate results of the operation were very favorable with the exception of a temperature of 104° during the first night. On the following morning the temperature was normal and remained under 100° during the first week. Antiseptic irrigation was resorted to daily, washing out a small quantity of pus from the hydatid and pleural cavities; the capacity of the former measuring 100 grams on the 8th day. The second week was

marked by abundant suppuration and hyperæmia. At the termination of the fourth week, the patient had a severe chill followed by a sudden rise of temperature (104°), depression and anorexia.

Symptoms of septicæmia developed during 14 days, being followed by an abundant discharge of pus from the deepest portion of the hydatid cavity. The same clinical tableau recurred shortly afterwards and covered a period of three weeks. Patient had lost 52 lbs. From the end of the second month convalescence was uninterrupted. The patient rapidly regained his normal weight and could have been discharged cured but for a fistulous tract 5 inches in depth, and one-eighth of an inch in diameter.

At various and repeated intervals I endeavored to close this fistulous tract but it proved rebellious to all methods of treatment. Curetting, scarification, canterization by means of the Paquelin or acids; antiseptic, stimulating and histogenetic substances were successively resorted to with very limited benefit.

Discouraged with these poor results, I again chloroformed the patient and, with the curette, tripled the diameter of the entire fistulous tract. At the same time, by resecting a half inch from the free extremities of the 6th and 7th ribs and removing the surrounding cicatricial tissue, an attempt was made to have the skin collapse under pressure and exclude the external half of the tract. This expedient proved beneficial but the deep portion of the tract progressed very slowly. A small incandescent lamp enabled me to examine the parts thoroughly but revealed nothing of importance.

At the present time the fistulous tract, although considerably diminished in size, has not entirely healed; it measures one and one quarter inch in depth. The patient's present weight is 155 pounds, his general condition remains excellent.

The time allotted me is too limited to analyze and determine the relative value of the diverse symptoms of hydatid cysts involving the convex surface of the liver, but I wish to call attention to a few diagnostic signs given prominence in recent publications.

In cases where the results of percussion and auscultation simulate those of a small pleuritic effusion, (600 grams for example), Denlafoy very judiciously states that were

the liquid of pleural origin, no deformation, tension or sense of restriction in the costo-diaphragmatic region would be noticed. Whereas in the case of hydatids, the deformation would equal that produced by a very large pleuritic effusion (3,000 or 4,000 grms.) In such cases the importance of careful inspection can not be over estimated. Another diagnostic sign of considerable value is the co-existence of extensive thoracic dullness and friction sounds in the right inferior pleural cul de sac.

Pain in the right shoulder is mentioned in numerous observations. The so-called pathognomonic "hydatid fremitus" or "thrill" (Frerichs) is exceedingly rare; some eminent physicians even deny its existence. The patient's occupation may constitute a strong presumption, as in the present case. Urticaria is referred to by French authors as a frequent sign of hydatids.

More often observed in abdominal cases, it is sometimes met with in cases affecting the convex surface of the liver. Debove's recent experiments relative to the pathogeny of urticaria demonstrated that it is the result of an auto-intoxication caused by the absorption of the hydatid fluid.

In my opinion the exploring needle should be used only as a last resort in the diagnosis of hydatid cysts. The dangers resulting from its use are decidedly more numerous and more serious than in pleural affections and the hooklets can not always be found in the liquid withdrawn.

Authors disagree regarding the treatment of hydatid cysts of the liver. Some incline toward methods which might be called medical (simple aspiration or associated with injection, electrolysis, etc) while others resort to surgical interference.

Tapping, although a very simple manœuvre, is not devoid of danger; the physician should remember the possibility of suppuration of the cyst from external or internal infection, the possibility of sowing scolices broadcast over the surface of the peritoneum or pleura, or inducing sudden collapse or suffocating the patient by rupturing a tight cyst into a bronchus. Antiseptic injections constitute a decided advance in the treatment of these cysts, but I am positively in favor of surgical measures in large cysts, especially in those of the convex surface of the liver.

Recamier's method, *id est*, the prelimi-

nary use of caustics, is of interest from a historical point of view only, its results having proved disastrous.

Bégin's or Volkmann's method of operating in two stages, although rather successful in the hands of several German surgeons, has succumbed to the fate of gastrostomy in two stages, being now considered superfluous. It is moreover difficult to understand the rationale of this operation, for nothing can be gained by its adoption in cases uncomplicated by pus, whereas the presence of pus constitutes an indication for immediate and expeditious interference.

The radical operations may be summed up in two classes: 1st. Incision and evacuation with or without drainage. 2nd. Extirpation.

The numerous statistics due to Australian surgeons prove conclusively the superiority of total extirpation over all other methods, especially in the group of cases under discussion. Total extirpation comprises the removal of all daughter cysts and mother cyst at the time of the incision.

This procedure is comparatively simple: after withdrawing the liquid, the elastic lining shrinks and can be extracted by means of gentle traction with forceps.

One great advantage of this method is that "when collapse of the walls of the hydatid cavity is possible so as to allow apposition, the surfaces will directly unite by a process analogous to the primary union of wounds." (Verco).

Another argument in favor of total extirpation is the facility thus derived to explore for deep cysts, which as Terrier has demonstrated co-exist frequently with the superficial variety.

It was at one time argued that total extirpation was liable to induce hæmorrhage. That this statement is erroneous is amply proved by the absence of organic connections between the hydatid membranes and the adventitious capsule that surrounds them.

PRURIGO.

R	Acid carbolic, crystall.....	3 grammes.
	Alcohol.....	10 "
	Glycerin.....	30 "
	Aq. dest.....	300 " —M.
Or,		
R	Chloral hydrat.....	3 grammes.
	Alcohol.....	30 "
	Aq. dest.....	300 " —M.

—HILLAET AND GAUCHER, *D. Med.*

Zeitung.

REPORT OF A CASE OF TRAUMATIC TETANUS TREATED WITH LARGE DOSES OF CHLORAL.

By J. B. THOMPSON, M. D.,

ATLANTIC CITY, N. J.

Fredrick Falter, robust German, aged 23, on Tuesday Oct. 27, stepped upon a nail which penetrated the ball of right foot. A simple domestic dressing was applied and the wound healed in about a week. Ten days after injury he noticed stiffening of jaws. Growing worse, I was called two days later, when undoubted symptoms of tetanus were present. The jaws were quite rigid, allowing about an eighth of an inch motion, which no reasonable amount of force could overcome. He complained of soreness of back and neck, which muscles were somewhat contracted and stiffened.

I gave him Potass. Bromide, 15 grains every 3 hours without benefit. The following day Dr. Krammerer saw the case in consultation, when chloral 15 grains every 2 hours was decided upon. At this time, the fourth day of the disease, the abdominal muscles also were in a state of tetanic contraction, altogether setting the trunk of the patient as if in a cask.

The fifth day he was given 20 grains of chloral every two hours, omitted occasionally when asleep. The patient sucked the medicine and nourishment through a rubber tube with a wooden mouth piece. Enema given, which caused the bowels to move naturally.

On the sixth day of the disease, sulphate of physostigmine was given alternately with chloral omitting a dose of chloral, commencing with $\frac{1}{2}$ increasing $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ to $1\frac{1}{2}$ grain doses; seemingly fast losing its power was discontinued in two days. On the sixth day the chloral causing so much pharyngeal irritation it was given by enema in a cup of warm milk or beef tea and egg, 50 grains at a dose, repeating only when symptoms demanded, usually in five to seven hours, the signal being more severe and frequent attacks of general spasm, becoming almost constant and which if not controlled promptly would cause the patient to become frantic with pain and dyspnoea. The chloral by enema would control these usually in fifteen or twenty minutes. On the sixth to eighth day,

morph. sulph. in $\frac{1}{2}$ grain doses was given alternately with the chloral, four doses of each sufficing for twenty-four hours. Nov. 19, the ninth day of the disease, undoubted evidences of cerebral congestion supervening, physostigmine was again tried with morph. sulph. and potass. bromide, as follows: At 11.30, 40 grains chloral were given; at 5.15 p. m., $\frac{1}{2}$ gr. morph. sulph. hypodermically and 30 grs. potass. br. by enema; at 8.30, 30 grs. potass. br. which was rejected. Being more restless $\frac{1}{2}$ gr. physostigmine was given without benefit; at 9.15, $\frac{1}{2}$ grain morph. sulph., which gave partial relief; at 11.30, just twelve hours after last dose of chloral, being satisfied that without physostigmine or morphia it would control the spasm, 40 grs. chloral was given, but patient had become so frantic that it did not give complete relief and morphia was given in one hour and chloral again in five hours, (4.45 a. m.), which did not have to be repeated till 11 o'clock that day. The treatment thereafter was morphia and chloral alternately, the chloral lasting twice as long as the morphia. It never became necessary to increase the dose above 40 grs. and never oftener than once in 6 or 7 hours if alternated with morphia. On the 12th day the dose was reduced to 30 grains which was not satisfactory, and the 40 gr. dose was returned to.

Up to the eleventh day the temperature had not risen above 99.5° , and as the masseter and abdominal muscles were relaxing, the back also becoming less rigid, hopes of recovery were entertained. This day, however, the temperature reached 101° and caused some anxiety, pulse hard and full 112 to 120; twelfth day some delirium, temperature 103° morning $102\frac{1}{2}^{\circ}$ evening; thirteenth day temperature 103° and he was assuming the typhoid condition and was given 15 grs. antipyrine, which reduced it in four hours $1\frac{1}{2}$ degrees. Pulse now 112 asleep; 126 awake. This day the diaphragm which had been doing all the work of respiration showed evidences of weakening while the auxiliary chest muscles had returned to partial use and were assisting largely. Now during an attack of general spasm, respiration would be entirely cut off, and was assisted artificially. This condition continued, becoming more typhoid until the close of the 15th day he succumbed. He took some days as much as 2 quarts of milk, besides other

nourishment. The chloral was always retained if given by enema in milk, but not so surely if given in water or beef tea, and was always satisfactory in its action. The final known complication was the rise of temperature and dependent adynamia, induced probably by demoralization of the heat centre by the tetanic poison.

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Selected Formulæ.

APPLICATION FOR RHEUMATISM.

Hebbing is said to employ the following solution locally in the treatment of rheumatism:

R Salol..... 55 5 i.
Sulphuric ether..... 5 i.
Colloidon..... 3 i.
To be applied around the joints which are affected by acute rheumatism.

—*L'Union Médicale.*

ONITMENT FOR HÆMORRHOIDS.

R Antipyrin..... 55 3 grammes.
Salol..... 0.10 "
Extr. belladonna..... 15 "
Vaselin..... 15 "
Cere..... q. s.
M. Sig.: A piece, the size of a nut, to be introduced within the anus thrice daily.

A SALVE TO QUIET THE ITCHING OF MEASLES, SCARLATINA, AND CHICKEN POX.

Dr. Klein (*La Semaine médicale*, No. 4, 1892), speaks highly of the following:

R Pure anhydrous lanoline..... 50 grammes.
Vaseline..... 30 "
Distilled water..... 35 "
Rub into the skin every three hours.

The evaporation of the water of this salve cools the capillary hyperæmia and quiets the itching.

TONIC IN MALARIAL CACHEXIA.

R Liq. sodii arseniatis..... 5 i.
Extr. eucalypti fl..... 5 li.
Tr. cinchona comp..... 5 i.
Aqua cinnamon, q. s..... 5 li.
M. Sig.—5 i j ter in die, in water, after meals.

STYRONE AS A DEODORANT IN ULCERATED CANCER.

R Styrene..... 4.00 grammes.
Glycerin..... 20.00 "
Distilled water..... 20.00 "
Sig.—Externally.

—*Nouveaux Remèdes; Ibid.*

DIARRHŒA MIXTURE.

R Tinct. opil..... 55 3 i.
Tinct. capsici..... 55 3 i.
Spts. camphor..... 55 3 i.
Chloroform purissim..... M xiv.
Alcohol, q. s..... ad 5 x.
Mix. Dose.—20 to 40 minims.

—*Squibb.*

ANODYNE LINIMENT.

R Oléi origani.....
Tinct. opil.....
Spts. ammoniac.....
Oléi olive..... aa os 1.
M. Sig.—Shake well before using. Apply with gentle friction.

A MILD ALTERATIVE TREATMENT.

R Potas. iodid..... 5 ias.
Tr. gentian comp..... 55 3 ii.
Aque. dest..... 55 3 ii.
M. Sig.—Teaspoonful in water after meals.

FORMULA FOR WINE OF COCA.

R Coca-leaves..... 8 ounces.
Cognac..... 1 1/2 pints.
Sherry wine..... 1 1/2 pints.
Hungarian wine..... 6 ounces.

Macerate for several days and add 7 grains of citric acid. Allow this mixture to stand for several days and then filter.

—*Pharmaceutische Post*, No. 27, 1891.

HOW TO ADMINISTER THE CHLORHYDRATE OF AMMONIA IN THE GRIPPE.

Dr. Marotte (*Le Bulletin médical*, No. 6, 1892) has found many persons to have difficulty in taking this salt in powder form, as it sometimes causes disagreeable burning in the stomach. In order to avoid this he administers it in a potion as follows:

R Muriate of ammonia..... 3 grammes.
Syrup of orange peel..... 40 "
Hum..... 15 "
Infusion of sage, ad..... 250 "
A soup-spoonful every two or three hours. Increase the dose according to the severity of the disease.

FOR HÆMORRHOIDS.

R Atropine sulphat..... gr. iv.
Acid. tannic..... gr. vj.
Morphine sulphat..... gr. vj.
Cocaine hydrochlorat..... 5ss.
Vaselin..... 5j.
M. et ft. ung.
S.—Apply a small quantity to the hæmorrhoid after each stool.

—*Rev. de Thér. Gén.*, No. 7, 1892.

CHRONIC DIARRHŒA IN CHILDREN.

Dr. F. Combemale (*La Semaine médicale*, No. 14, 1892) recommends the following:

R Extr. kola nut..... gm. 1 (gr. xv).
Syrup of quinces..... gms. 60 (℥. iij).
To be taken by the teaspoonful within twenty-four hours.

FREY'S EMULSION OF IODOFORM

R Iodoform..... P. 50 grammes.
Glycerine..... 40 "
Tragacanth..... 25 "
Water..... 10 "

A teaspoonful of this is added to a pint of water to be used as an injection in cystitis. Prof. Billroth terms a 10 per cent. mixture of iodoform and glycerin an "emulsion of iodoform." The iodoform should first be triturated with a little of a mixture of equal parts of glycerin and water.

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Leading Articles.

THE USE OF HYPNOTICS AMONG THE INSANE, WITH A REVIEW OF THOSE CHIEFLY EMPLOYED IN AMERICAN HOSPITALS FOR THE INSANE.

Although this subject is of special interest to those having practical relations with the insane, it will also perhaps be of interest to the general practitioner, because to him at times comes the responsibility and care of these unfortunate cases. Moreover, it is of the utmost importance that the insomnia of nervousness, incipient insanity or the first stages of decided mania or melancholia should be controlled by the best means which experience has pointed out.

In our opinion drugs are far more frequently resorted to for the purpose of inducing sleep than they should be, and not infrequently do they do positive harm in the treatment of insomnia. Many milder measures should first be tried whenever possible. Some of these are hot douches or baths followed by brisk rubbing with coarse towels, hot nutritious drinks at bedtime, care of the diet with proper stimulation in asthenic cases of mental disease, hot applications of the spine followed by galvanism of the spine, and many others of similar nature. At present, however, we have in mind cases in which these means have failed and in which drugs must be tried.

Although so much valuable work has recently been performed both in the discovery and clinical application of new hypnotic substances, the evil of the day seems to be that they are used without proper regard to their specific actions. This error is a most natural one in the case of all new medicaments. Naturally, one wishes to experiment with them with

the hope that at last the *ideal* hypnotic has been evolved from the crucible or still; yet after all we know that as far as the insomnia of mental disease is concerned we possess no one drug that is applicable to all cases, but that several drugs do exist which when properly used with due regard to their actions go very far towards affording us a specific. With the advent of each new hypnotic a vast wave of experimentation has swept over this country, and it is only when they have passed and broken that we are beginning to appreciate the proper places of these substances in their class. The enthusiasm with which such hypnotics as paraldehyde, sulphonal, chloralamide, etc., were received showed itself in the many papers that were published in our medical periodicals, full of unstinted praise to the favorite of the hour; but now the wise hand of Time has kindly modified many of these first impressions, and shown us both the virtues and faults of these various agents. This, however, is but partially true, for the greatest difference of opinion exists regarding some of them, and, if we are to place confidence in the published results, the greatest variance exists in their clinical effects when employed by different men. This being the case let us briefly review some of these drugs as intelligently as the diverse opinions will admit.

Before considering separately the most commonly used hypnotics it may be well to briefly refer to the indications for their employment in cases of insanity. These indications may be roughly grouped and summarized as follows:

I. In acute mania, acute delirious mania, acute epileptic mania before or after fits, and in the acute maniacal stages of general paresis or chronic mania. In these cases they are indicated to lessen motor and cerebral activity, to prevent exhaustion, to conserve the strength and to promote recovery when possible. It is in these states that hypnotics are urgently

demanding, and are of the highest importance if sleep can be induced.

II. In the noisy states of chronic mania, late stages of general paresis and in the restlessness often attending convalescence from acute psychoses.

III. In the insomnia of acute and chronic melancholia for the purpose of aiding by rest the recuperative powers of the system. Here is it most important that the hypnotics employed leave a minimum of depressing after-effects, and also that they do not disorder digestion; otherwise they are better omitted from the treatment.

IV. In alcoholic insanity, periodic and circular insanity, and in primary or terminal dementia. The beneficial actions in these conditions being to quiet motor excitement and control the patient, as well as to obtain sleep with its good effects.

These are the chief indications which present themselves among the communities in American hospitals for the insane; for which every known remedy has been from time to time employed. It would be useless and beyond the scope of this mere sketch of an important subject to quote extensively from the voluminous literature respecting the several drugs to be alluded to, so that we only endeavor to offer certain facts which are of attested value:

I. *Sulphonal*.—This drug has been extensively tried since its discovery by Kast. It has been used in the insane by Cramer, who had "positive success" in 92 cases, with no instance of any unpleasant after-effects; by Schwalbe, who reports success in 66 per cent. of his cases; by Rabba, who used it over 200 times with "good effect." Papers have been written in praise of it by such authorities as Ziemssen, Kast, Engelman, Oestreicher, Schotte, Schmey, Frankel, Mathes, Salgo, Rosenbach, Rosin, and others abroad, while in this country we have the contributions of

Flint, Wetherill, Sachs, Wilson and Hutchinson, Griffith, O. M. Hay, J. G. Kiernan and many others.

Much difference of opinion exists at present concerning the value of this drug. There can, however, be little doubt of its efficacy in cases of insanity, although its slowness of action is a disadvantage to its use in acute cases. It is chiefly beneficial in cases of simple mania, mild restlessness, excessive "nervousness," and in all cases in which simple insomnia is to be overcome. It is practically useless in cases wakeful from pain, fever, cough, etc. In certain forms of light melancholia, and in the excessive nervous insomnia of alcoholism it is one of the best remedies, when it is well borne by the stomach. No better way has been found to give sulphonal than that suggested by Kast—in a half cupful of tea or light broth two or three hours before its effects are desired.

Jastrowitz, in a paper read before the Berlin Medical Society, places sulphonal second in the point of safety in therapeutic doses, chloral being in his opinion entitled to first place in this respect. He also thinks it the least efficient of all hypnotics, and liable to cumulative action. The experience in this country is against the conclusions of Jastrowitz, and the drug is being extensively used in cases of insomnia which do not demand a stronger remedy. It has been found repeatedly to produce sleep when other hypnotics have failed, but on the other hand in the experience of nearly everyone it is often uncertain in its action. There can be no doubt of its occasional toxic effects, which may be due to the slowness of its excretion, as well as to individual idiosyncrasy. The chief symptoms of poisoning are: mental torpidity, muscular weakness, giddiness, feeling of oppression in the head, cardiac weakness. These symptoms should always be a warning to stop the drug, since they may readily deepen into dangerous and fatal effects. Sulphonal acts best

when given in a single large dose, which, at the beginning, should not exceed fifteen grains, and where it is to be employed continuously it is wise to allow frequent brief intermissions so that a possible accumulative action is avoided.

II. *Paraldehyde*.—This drug is exceedingly valuable in the insomnia of mental diseases, because besides its hypnotic action it is a circulatory stimulant and can freely be given in cases of cardiac weakness. Its disagreeable taste, the odor it leaves upon the breath for 10 to 18 hours after its administration, and its tendency to disorder digestion are its chief disadvantages. It is nevertheless, in our opinion, one of the most serviceable of all the hypnotics used in Insane Hospitals. It can be employed continuously for a long time without serious effects, although some rare cases of paraldehyde habit have occurred. Out of the many hundreds of cases in which we have seen this drug employed, only one case of paraldehyde habit has occurred, and that was due to an improper use of the remedy before the patient came under observation. It is more widely applicable to the insomnia of insanity than almost any other drug, and may safely be given in doses of 2 fluid drachms, and even as high as a half an ounce in severe cases of sthenic mania. It is, however, chiefly of service in the milder forms of mania, and in melancholic states, except when employed in conjunction with remedies to control higher degrees of motor excitability. Owing to its excessive pungency it should be given well diluted, so that the stomach may be as little irritated as possible. In epileptic mania it has been found very valuable, and has even been employed as a remedy for epilepsy and the status epilepticus by H. B. Williams, assistant physician of the Arkansas Insane Hospital.

III. *Amyl Hydrate*.—This substance has been extensively used in the same kinds of cases in which paraldehyde is of

service, but speaking generally it is inferior to it in its results.

IV. *Hyoscin*.—This is one of the most valuable drugs when it can be had pure. It is speedily useful in mild cases of insomnia, mania with insomnia, and great restlessness, and may be given in small doses continuously in certain forms of cerebral excitement, such as frequently occurs in the initial stages of general paralysis of the insane. In the wild frenzy of acute mania, it is also of great service in quieting motor activity and thus conserving the vital forces of the patient. Its disadvantage is its action upon glandular activity by which it injuriously affects nutrition.

V. *Hyoscyamine*.—The literature on this drug shows that it is extremely valuable in controlling motor excitement, but of less value as a hypnotic. The amorphous alkaloid is the more frequently employed, and has been given with benefit to acute maniacs in the stage of wild, uncontrollable excitement in doses of one-fifth of a grain hypodermatically. Reports from various asylums confirm this practise, and it would appear that such doses are exceedingly well-borne in the condition above named. Owing to the marked gastro-enteric disorder occasioned by the remedy it cannot be given continuously in chronic cases, and its chief value is to tide over the height of an attack of acute maniacal excitement, in whatever mental disease this condition may occur. Some writers have cautioned against its use in patients with feeble hearts, while others do not intimate trouble in this direction. Our experience in its employment in cases of mania has been that it acts promptly and satisfactorily when given to allay motor excitement with delirious mental exaltation.

VI.—*Morphine*.—The use of morphine in mental disease seems to be, judging from the available evidence, chiefly of value in melancholic states and as a sopor-

ific. Where there is a physical cause such as pain, cough, dyspnoea, etc., for insomnia aside from melancholia in any case, it is perhaps our best remedy, provided it is administered without the knowledge of the patient that he is taking it. The danger of establishing the morphine habit in these cases must be sedulously guarded against. Morphine is of comparatively little use as a hypnotic, except in combination with other drugs, such as chloral or the bromides. When given in asylum practise it is usually administered hypodermatically.

VII. *Chloral*.—Probably no drug is more extensively used as a hypnotic, antispasmodic and depressant than this. Among the insane it is commonly employed, often in combination with the bromides, to produce sleep in all cases where no contra-indication to its use exists. In the status epilepticus it has been found the best single remedy, and in such cases is usually administered by the rectum. From what is known of its physiological action upon the cortical cells of the brain it is probable that the sleep produced by chloral is nearer natural sleep than that induced by any other hypnotic. Its disadvantages are its depressant effects on the circulation, the necessary increase of the dose to maintain good effects, and the danger of the chloral habit.

VIII. *Chloralamide*.—This substance, which is intended to replace chloral, has been the subject of extended editorial notice in the issue of the *REPORTER* of March 5th, to which the reader is referred.

STATISTICS OF THE PASTEUR INSTITUTE.

At the general meeting of the Paris Pasteur Institute, which was held recently, a report was presented which showed that since the establishment of the Institute there has been a steady diminution in the death-rate of the cases treated. Thus in 1886 the percentages of deaths was 0.94; in 1887, 0.73; in 1888, 0.55; in 1889, 0.38; in 1890, 0.32; and in 1891, 0.19.

Book Reviews.

THE POCKET PHARMACY. With a Therapeutic Index. A Résumé of the Clinical Applications of Remedies Adapted to the Pocket Case, for the Treatment of Emergencies and Acute Diseases. By John Aulde, M. D., Member of the American Medical Association, etc., etc. New York: D. Appleton & Co., 1893. Price \$2.00.

This brochure has been written expressly to advocate the use of the pocket case containing twenty-four vials of tablets. The advantages claimed by the author for this addition to the small literature of the day, are; first, that it is a desirable mode of dealing with emergency cases; second, that the volume will prove of special aid to the young physician who he thinks is likely to become "rattled" when he attempts to write a complicated prescription at the bedside; and, finally, that the older physician will find it useful in the saving of the time required in sending the prescription to the drug store. The book is also stated to be a plea for smaller doses than those usually employed.

The contents consist of articles on the remedies selected by the author and comprised in the pocket case. These are arranged in alphabetical order; under each drug is a list of the diseases in which the remedy may be used, also arranged alphabetically. Nothing is said of the physiological actions of the drugs, and scarcely any references are given throughout the work. It is simply a compilation of the chief indications for the drugs found in the pocket case.

As an emergency case the selection lacks many requisites and from a general point of utility is far from being what the average practitioner would likely adopt.

Both the conception and pretenses of the book will not, we think, meet with general approval, and while the author states that the case was made for the book the impression grows on one that the latter is more or less in the nature of an advertisement for a prominent pharmaceutical firm. It is unfortunate that the author did not render such an inference impossible.

HOSPITALS AND ASYLUMS OF THE WORLD. *Their Origin, History, Construction, Administration, Management and Legislation; with plans, etc., etc.* By Henry C. Burdett. Four volumes. Vols. I and II. London: J. and A. Churchill, 1891.

The first two volumes of this extraordi-

nary undertaking are devoted to asylums and asylum construction. The author, who has been for twenty-five years connected with asylum management as an official or as a director has collected a vast amount of material. Statistics of the capacity, methods, equipment and construction of asylums in every part of the world are included. Discussions of the best plans for buildings, of the best disposition of patients for treatment, of training and training schools for attendants are all to be found here at appalling though infinitely useful length. Many ground plans are given in the volume on construction of the different types of buildings in use, and these are taken from many different countries. A thorough, reasonable and convincing argument is made for the "block system" of building or some modification of it.

A few headings of chapters will give a good idea of the extent of ground covered and of the minuteness with which the subject is treated: In the second volume among other matters there are considered at length—sites, construction, buildings, model plans, warming, ventilation, lighting, drainage, detached hospitals, farms, gas works, furniture and decoration and sewage irrigation of farms.

Our own country makes a poor showing. Most of our asylums have been built by architects with little knowledge of what the rest of the world had done in this direction, and their types are rather those of the hospital than of the asylum. In management, with two or three shining exceptions, we are scarcely less behind the times, and worst of all, because most easily corrected, there is scarcely an insane asylum in the United States which is not shown by its own reports to be dangerously and unwholesomely overcrowded.

STATE MEDICAL SOCIETY OF NEW JERSEY.

The one hundred and seventy-sixth Annual Meeting of the Medical Society of New Jersey, will be held at Atlantic City, on the fourth Tuesday in June, 1892, and will continue in session the following day. A special train will leave Camden on Tuesday at 12.15 p. m., for the accommodation of those who wish to attend the meeting.

WM. PIERSON,
Secretary.

Periscope.

THERAPEUTICS.

CHAULMOOGRA OIL IN THE TREATMENT OF LEPROSY.

Berge (*New Orleans Medical and Surgical Journal*, 1891) extols this remedy, and gives the notes of three cases in which it was employed with great benefit. The results seem remarkable. The dosage was ten drops of oil in a spoonful of water three times daily, gradually increased until forty-five drops three times daily were taken without disturbance of the alimentary canal, except in large doses, when the bowels were liable to be acted upon too violently. The author thinks the oil should be regarded as a specific. Its absorptive properties were manifested in a striking degree upon the tubercular infiltrations; it afforded relief to the nervous phenomena, relieved the anæsthesia, and restored health to the body and mind. Reliance seems to have been placed upon its internal administration, for it is stated that "the remedial properties of the oil externally have not been fully tested," and the author refrains from speaking about this question.

THE TREATMENT OF THE STATUS EPILEPTICUS

The *St. Petersburg Med. Wochenschrift* publishes an account of a method of treating the so-called "status epilepticus," which has been successfully adopted by Dr. Kerning. He gives the following particulars of a case treated by this method. A girl in the Obuchoff Hospital in St. Petersburg, after suffering a whole night from almost continuous epileptic convulsions, next morning was unconscious, but without any œdema of the lungs, and with a fairly good pulse. On the convulsions being renewed a hypodermic injection of 0.02 gramme of hydrochlorate of pilocarpine was given, and 1.5 grammes of camphor in an emulsion. Profuse perspiration followed, and the convulsions immediately ceased, but for an hour pulmonary œdema and collapse seemed imminent. These symptoms, however, passed off, and were followed by sound sleep and a good pulse. The patient was made to lie on her side to prevent annoyance from the excessive secretion of saliva.—*Lancet*.

THE TREATMENT OF INFLUENZA.

In a lecture on influenza, Baccelli stated that in cases marked by bronchial distress, concurrently with a feeble heart, camphor is decidedly useful in the first stage. Four grains of camphor in fifteen minims of olive oil may be injected beneath the skin every three or four hours. If camphor fail, injections of ether often succeed admirably. In other cases injections of strychnine, in doses ascending from a thirtieth of a grain every twelve hours, will often tide over a crisis. To sustain the vital powers hot wine may be given in small quantities at short intervals. In the gastro-enteric variety of influenza in the young and strong, ipecacuanha may be employed to induce emesis. When the respiration is embarrassed striking benefit is often derived from inhalations of oxygen.—*Lancet*, No. 3569, p. 220.

TREATMENT OF FISTULA BY HYDROGEN PEROXIDE.

Dr. H. Graff, a military surgeon of Christiania, publishes in the *Norsk Magazine* the result of his experience of peroxide of hydrogen in the treatment of abscesses which do not admit of being laid completely open so as to subject them to antiseptic treatment, and of fistulous sinuses offering the same difficulty. The author recommends, in preference to all other antiseptic fluids, irrigation with a fifteen-volume solution of peroxide of hydrogen, which he employed with the greatest success at the Royal Hospital of Christiania. The great development of gas which takes place in consequence of the decomposition of the peroxide when coming in contact with blood or pus removes the pus very effectually. The irrigation, followed by proper antiseptic dressing, causes a considerable decrease of the discharge, and healing takes place in a remarkably short time. In the case of cachectic patients, when granulation is slow, Dr. Graff recommends that the irrigation should be occasionally changed for injections of equal parts of balsam of Peru and ether. The treatment is especially valuable in cases of indurated wounds with puriform cavities. It is, of course, necessary to make due provision for rapid and free drainage, as the development of much gas may otherwise produce serious pressure.

NEW OBSERVATIONS CONCERNING THE THERAPEUTIC ACTION OF ICHTHYOL.

Stacquarello (*Journal d' Accouchements*, January, 1892.) found that ichthyol proved very valuable in erysipelas; in a case of generalized pruritus, a 10 per cent. ointment and baths with ichthyol soap cured the affection in a few days. The same result was obtained in a case of pruritus scroti, and also in one of dermatitis accompanied with suppuration. Lichen urticaria and also pruritus vulvæ, due to a severe leucorrhœa, yielded to the use of ichthyol soap.

THE ACTION OF CACTUS GRANDIFLORA.

A recent physiological and therapeutic study of this new medicament has been published by Edouard Boinet and Jules Boy-teissier (*Bulletin General de Therapeutique*, Oct., 1891.) They find that *cactina*, the alkaloid of the plant, is but little poisonous. It increases the energy of the cardiac systole, exhibiting all the characters of a heart tonic. In doses of two milligrammes, the drug did not diminish the number of cardiac beats in the case of the frog, nor did it produce any alterations in the movements or the sensibility of the batrachian. For therapeutic purposes the authors employed extracts and tinctures of the plant, especially Adrian's tincture, and the results obtained, in the treatment of cardiac disease, have been more or less satisfactory. In summing up their conclusions, Boinet and Boy-teissier found: (1) that ten minutes after the first injection, in the case of the frog, the cardiac energy was increased; (2) that this effect was transitory; (3) that it was only maintained under the influence of new doses; (4) that in large amounts the remedy diminished the cardiac pulsations, this being accompanied, at a later period, by irregular contractions of the heart; (5) that *cactina* increased markedly the force of the heart without producing, as does the extract, a diminution of the pulse-rate; (6) that the tincture, in doses of forty drops, has no therapeutic effect; (7) that in systolic cardiac affections the tincture, in the same quantities, was similarly without any appreciable effect; (8) that in true cardiac disease, in which there was a latent want of proper compensation, daily doses of eighty to one hundred drops raised the energy of a failing heart; (9) that in secondary cardiac symptoms, in arrhythmic

conditions of nervous origin, daily doses of eighty, one hundred, and one hundred and twenty drops were well borne, and generally produced a regularity of the pulse; (10) that even with these large amounts, used for a considerable length of time, no untoward after-effects were observed in patients, or any evidence of a cumulative action.—*Univ. Med. Mag.*

THE TREATMENT OF URÆMIC COMA AND CONVULSIONS.

Dr. John Ferguson sums up a paper upon this subject in the *Therapeutic Gazette*, 1891, No. 9, p. 583, as follows:

In cases of albuminuria of moderate severity, give the saturated solution of magnesium sulphate; if more acute and urgent put the patient in bed, with the head elevated. If there be severe headache, any muscular twitchings, or tendency to coma, give calomel, croton oil, and nitrate of potassium, and maintain the action of the bowels by salts. Induce free perspiration by warm packs, hot drinks, and the salicylates. Allow no animal food but milk, and give liquids very freely. If convulsions, a hypodermatic injection of morphine, followed by pilocarpine. In pregnancy, push this treatment vigorously, thus making interference unnecessary. To secure full action of the skin, the use of salicylate of sodium or potassium is strongly advised.

CATRAMINE, A NEW TEREBINTHINATE.

VINCENZO GAUTHIER (*Gazz. degli Ospitali*, February 4th, 1892) gives the following information, derived from a laborious series of experiments, with regard to catramine. Chemically, it is an essential oil, which resinifies very easily, and resembles very closely the turpentine derived directly from the coniferæ. Physiologically its action in animals closely resembles that of oil of turpentine. It contains more resin than turpentine, and appears to be better borne. It is absorbed well either by the stomach or when given as vapor by the lungs; it is eliminated with the urine in the form of resin. From this fact it should be useful in diseases of the genito-urinary system. From a number of clinical trials the author considers that catramine is indicated (1) in chronic respiratory troubles, with abundant secretion; in the subacute stages it may be use-

fully combined with a narcotic; it diminishes the secretions, which under its use regain a healthy character. (2) In genito-urinary troubles where it may very advantageously replace essence of turpentine.

—*Brit. Med Jour.*

MEDICINE.

A REMARKABLE CASE OF FEBRILE CHLOROSIS.

The following interesting case is reported by J. de Dios Peinado (*Gaceta Médica Catalana*, January 15, 1892.): A woman, 32 years of age, multipara, menstruated 40 days after her third confinement; from this moment the patient became pale, coughed somewhat and had evening fever, intermittent at first, remittent afterwards, and continued, finally reaching a height of 40.5° C. A thorough examination of all the internal organs gave negative results; the patient, however, had a gastro-intestinal catarrh accompanied with anorexia, dyspepsia, nausea and vomiting, diarrhoea and pains; symptoms all were attributed to a tubercular infection. She was placed under an anti-tubercular treatment, but without any good results. The same symptoms continued, with, soon afterwards, some harshness of the respiration. The persistence of the condition and the absence of all physical signs in the lungs, led the author to diagnose the case as one of febrile chlorosis. The administration of the iron preparations being contra-indicated owing to the catarrhal state of the digestive tract, the patient was ordered to take 1 centigramme of calomel every 6 hours, a medication that, in many cases of acute anæmia (in which the parasitic nature of the disease is probable) may be considered as heroic. Two days after the beginning of this treatment the vomiting and the diarrhoea ceased, and in 5 days more the fever disappeared and did not return. The clinical history of this interesting case shows: 1. How easy it is to confound certain acute anæmias, of infectious or of nervous origin, and which disturb the hæmatopoietic processes, with pulmonary or general tuberculosis; 2. The great error of those who consider mercurials anæmia producing agents, and who, therefore, abstain from employing them even in syphilitic cases, on the supposition that such

remedies are followed by great destruction of the corpuscular elements of the blood. Clinical and experimental evidence demonstrate the fact that mercurials, given with precaution, are powerful reconstituent remedies in a great number of anæmias, and even in those conditions of impoverished blood from organic causes, such as are found in tuberculosis and scrofula. This opinion has for a long time been entertained by Hufeland and sustained in our days by the observations of Hayem and Doehmann.

ACUTE MEDIASTINITIS.

M. Santa Maria y Bustamante (*Boletín de Medicina Naval*, January 15, 1892.) publishes the following case: A man, 37 years of age, had, 2 years previous to his present ailment, a pneumonia of the base of the right lung, from which he recovered completely, no trace being left behind. Recently he felt a sharp pain over the sternal region, corresponding to the 4th. costal cartilage of both sides. This painful sensation came on spontaneously, but could be provoked by a slight pressure; he suffered at the same time from oppression, accompanied with great distress; the respiration was accelerated, superficial and interrupted; he had a dry cough, and the action of the heart was tumultuous. Fever did not rise above 39° C. From the negative results obtained after a thorough examination by auscultation and percussion over the heart and lungs, and the absence of swelling of the jugulars and the paradoxal pulse, the author, by exclusion, diagnosed an acute mediastinitis. Under a large blister placed over the anterior part of the chest, and a few injections of the hydrochlorate of morphine, the symptoms disappeared. The writer, then, details the possible terminations of acute mediastinitis, and especially the formation of mediastinal abscesses which, in their passage, may go through most of the organs within the thoracic cavity and even perforate the large blood-vessels. The diagnosis of this affection is often quite difficult, and then can only be established by exclusion; it has no especial symptomatology, and may frequently be mistaken for a dry pleurisy, so much the more so, when the condition may, itself, be a symptom of pleurisy.

INTERMITTENT CLAUDICATION AS A DIAGNOSTIC SIGN IN DOUBTFUL CASES OF DIABETES.

R. Vizioli (*Annali di Neurologia*, f. 2, 81, 1891) believes that in diabetes, intermittent claudication is always a sign of the existence of a hyperplastic endoarteritis; that it precedes gangrene and, consequently, it is a sign of great prognostic value. In one case referred to by the author, the disease was accompanied by a fatal attack of angina pectoris, proving that the coronary arteries had taken a part in the endoarteritis. The sign under consideration will, therefore, prove of great diagnostic value in doubtful or ill-defined cases of diabetes.

HYDATID CYSTS OF THE LUNGS.

The following observation is published by A. Laveran (*La Medecine Moderne*, February 4, 1892): A young man, 26 years of age, military inclined, entered the hospital on the 7th. of January, 1892. The history of the case only revealed the fact that the patient had suffered from measles at the age of 3 years. During the latter part of the month of October, 1890, he felt, while fencing, a sharp pain in the chest, followed by abundant hæmoptysis. This was repeated; the patient had sometimes purulent expectoration, and continued to have symptoms of pain over the region of the chest, dyspnoea, cough and apyrexia. By December, 1891, the expectoration consisted of pus mixed with blood and whitish membranes, which, under the microscope revealed a hydatid nature. The disease comprised, in the course of development, three periods: a latent period; a second period characterized by hæmoptysis, dullness on percussion, an obscure respiratory murmur, together with other symptoms peculiar to tuberculosis. During the third period, the cyst either opened into the bronchial tubes, or either, after suppuration had taken place, the matters found their way into the pleura. This latter event would have produced the most serious symptoms, and perhaps rapid fatal results. The presence of the membranes spoken of, in the sputa, cleared the diagnosis. The pathogenesis of the echinococci is to-day well understood. The germs are produced by the ova of the tenia echinococcus of the dog. Thus is explained the frequency of this disorder in Iceland, where dogs are numerous and live

promiscuously with the inhabitants. Hydatid cysts are likewise of frequent occurrence in Australia.

CLINICAL AND EXPERIMENTAL RE- SEARCHES ABOUT TETANUS OF GASTRIC ORIGIN.

L. Bouveret and E. Devic (*Revue Médicale*, January 10 and February 10, 1892.) have made an interesting study of the above subject. The tetanus which sometimes occurs in patients suffering from dilatation of the stomach, is a complication proper of gastric ectasis, this being accompanied by a permanent hypersecretion. This tetanus results from an intoxication of a gastric origin; but such intoxication ought not to be attributed to a pathogenic microbe which vegetates in the stomach. It results from stomachic chemical changes, changes which characterize the constant hypersecretion. The peptotoxine of Brieger does not exist wholly as a normal product of the peptonization of the albuminoids. It may arise in the course of *extracting* operations. Hydrochloric acid in the free state and alcohol, in the presence of peptone, are the two factors in the formation of peptotoxine. The rôle of the alcohol in these cases is not only that of a dissolvent; it is a true reagent, and takes a part in the formation of the toxic substance. When introduced intravenously, a solution of an alcoholic extract of the liquids of digestion, natural or artificial, produces violent tetanic convulsions; subcutaneously, however, it only causes paralytic phenomena. The symptoms produced by experimental poisoning, when the dose is small and the injection made slowly, bear great analogy to those of tetanus observed in man. In one instance, the convulsive symptoms appeared after the ingestion of a large dose of alcohol. It may, therefore, be asked whether the convulsant substance contained in the alcoholic extract may not arise or be produced in the abnormal conditions of digestion in a dilated and hypersecreting stomach. This hypothesis is confirmed by the results of the experiments of the authors. A highly convulsive alcoholic extract may be prepared by evaporating the liquids of digestion and the alcoholic solutions over a stove at a temperature of 39°C., that is, at the temperature of the stomach. The authors have produced convulsive movements by intravenous injections of artifi-

cial digestions to which alcohol had been added, and in which the hydrochloric acid remained always in a free state. The age, so to speak, of the artificial digestions increases the convulsive power of these. A digestion one month old may produce true tetanic convulsions. The nature of this convulsant substance, the highly probable cause of this gastric tetanus, remains to be determined. The experiments of Bouvet and Devic prove that such a substance is not a chlorhydrate of ethylamine or of ethylene-diamine. It is probably the result of a syntonine to which alcohol gives properties: a poisonous odor, a toxicity and a convulsant power. It is important, therefore, to suspend completely the use of alcohol in all cases of constant hypersecretion, and especially in those complicated with gastric retention. When tetanus appears, the best treatment consists in evacuating and washing out the stomach by means of a sound.

CEREBRAL LOCALIZATIONS.

A. Brunati (*Archivio Italiano* XXVII, fasc. 3 and 4, 1891) reports a case which is of interest in a certain point of view. The subject was a young man twenty-one years of age, who had had, when three or four years old, a fall, injuring the parietal region of the left side, and for five years he had been considered insane though previously he had been of weak mind and neurotic disposition. He was of small size and unsymmetrical and deformed in the lower limbs. There was no paralysis nor sensory disturbance and there had been no convulsions. The patient died of ileo-typhus and the section showed adhesions of the scalp to the skull at the point of injury, also of the dura to the calvarium and to the cortex below, and an old lesion involving the two ascending convolutions of the left side with extensive destruction of the gray matter of the cortex, also involving the frontal and parietal convolutions. Another case is reported in the same number of the *Archivio Italiano* by Dr. G. Antonini which has a similar interest in some respects. The patient had suffered with convulsive attacks which had left him with paralysis of the right arm and facial and lingual hemiparesis of the right side with amnesic aphasia. The autopsy revealed diffuse general endo-arteritis obliterans, atrophy of the convolu-

tions of the insula with softening of the same, which also involved the first and second temporal convolution and extended inward deeply in the centrum ovale to the lenticular nucleus and the external capsule. Posteriorly it reached the external occipital convolution. On the external surface of the brain the softening was apparent at the foot of the third frontal, the two ascending and the posterior portion of the inferior parietal convolutions. The membranes were adherent in various portions of the cortex. The most interest here attaches, it seems to us, to the absence of sensory aphasia depending on the lesions of the temporal convolutions, which absence is not to be explained by any exceptional functioning of the corresponding parts of the intact right hemisphere as the patient was not left-handed. There was apparently no evidence of verbal deafness.

FACIAL PARALYSIS.

Dr. Lusanna (*Rivista Veneta* for October, 1890), makes quite an extended study of the course and disease of the seventh pair of cranial nerves. He divides it anatomically into five portions:

1. Cerebral.
2. Bulbar.
3. Intracranial; the trunk of the nerve from its root to its entrance into the internal auditory meatus.
4. Inter-cranial; its traverse through the cranium.
5. Extra-cranial, from the stylo-mastoid foramen to its different terminal filaments.

These divisions are of much importance, not only from a diagnostic point of view, but also in rendering a prognosis. Lesions occurring in the second portion are often fatal; those in the first, second and fourth are serious, while those in the fifth are light.

The differential symptoms indicating the seat of the disease in its course, are:

1st Portion.—Cerebral, conservation of reflex phenomena.

2d Portion.—Bulbar, paralysis of the extremities.

3d Portion.—Intra-cranial, injury to the neighboring nerves.

4th Portion.—Inter-cranial, gustation of the anterior part of the tongue abolished. Hyperæsthesia of audition.

5th Portion.—Extra-cranial, paralysis of the facial muscles not of the palate.

SURGERY.

NERVE GRAFTING.

Mr. Damer Harrisson, after recalling to the Clinical Society of London the excellent results that followed close apposition of the ends of divided nerves, observed that the only satisfactory method of dealing with nerves, the ends of which were too far apart to admit of their being sutured, was by nerve grafting. He referred in detail to the history of eight cases in which this operation had been performed at home and abroad, and then narrated a case under his own observation. A lad, aged 13, was admitted into the Liverpool Northern Hospital eleven weeks after a cut of the front of the right wrist had divided the median nerve and all the flexor tendons except the flexor carpi ulnaris. On admission the fingers were immovably fixed in the flexed position, paralysis of both motion and sensation being complete in the region supplied by the median nerve. Trophic changes were also present, the hand being blue and cold, the skin glossy, and the short muscles of the thumb much atrophied. The flexor tendons were found to be matted together; nearly 2 inches of the median nerve had been destroyed, leaving a gap between the ends. After dealing with the tendons, the nerve ends were freshened, thus increasing the separation to 2 inches, and a graft $2\frac{1}{2}$ inches in length, taken from the sciatic nerve of a recently killed kitten, was fixed in position by one fine catgut suture at each end passing through the substance of the nerve. The limb was then put in a splint, with the hand flexed and the fingers straight. The wound healed by first intention. Sensibility began to return in the palm at the end of forty-eight hours, and eventually extended to the fingers and the thumb, except to the tips of the fingers. There was also transference of sensation impressions, those from the index finger being referred to the middle finger. At the end of three months the nutrition of the hand showed great improvement. Motion did not return until the end of five months, and appeared first in the short muscles of the thumb. Now the patient could oppose the thumb to the index finger. Another operation of the same kind had still more recently been performed by Mr. Mitchell Banks, of

Liverpool, upon the ulnar nerve at the elbow after excision of a neuromatous tumor, 4 inches being grafted from the sciatic nerve of a dog. Sensation returned within thirty-six hours. Of the ten cases quoted by Mr. Harrisson, three were perfectly successful, six partially successful, and one failed. He attributed the difference in the success attending primary and secondary grafting to the trophic disturbances present when grafting was resorted to as a secondary operation. Restoration of function took place readily enough after long periods of time in respect of sensory nerves, but the degeneration which took place forthwith in the distal portion of motor nerves rendered repair slow and the return of function very gradual.

A NEW SUTURE.

Dr. Alexander Fulton, in *Medical News*, January 23, 1892 describes a new suture. Round pieces of amber, about one-sixth of an inch in diameter, of various lengths, are used, perforated as required. Lead, glass, or any material that can be kept thoroughly aseptic may be used. Fine wire (silver preferred,) after immersion in carbolic water, is run through the lip of the wound about half an inch from the edge when deep suture is desired, and one-third of an inch when more superficial suture is wanted. It is then put through the bar and clamped with a perforated shot. The lips of the wound are thus by traction brought in perfect apposition.—*Med. Age*, Feb. 10, 1892.

TREATMENT OF RETRO-PHARYNGEAL ABSCESS IN INFANTS.

Bilton Pollard writes in the *Lancet*, February, 1892: Retro-pharyngeal abscess is not always dependent on spinal disease. In the latter the abscess occurs under the muscular structures in close contact with the vertebræ, in the former pus is found in the cellular tissue between the pharynx and the prevertebral muscles.

The disease is not common, but merits attention from its possibly serious termination if not discovered. Evacuation of the abscess through the mouth has not proved satisfactory, on account of the difficulty of maintaining drainage.

The method recommended is to make an external incision along the posterior

border of the sterno-cleido-mastoid muscle near its superior attachment, and carried through the superficial structures until the floor of the posterior triangle is reached; the great vessels and nerves are then separated by blunt instruments and a finger is introduced into opening so deeply that it can be felt by a finger in the mouth of the patient, to be against the pharyngeal abscess.

A director is then thrust into the abscess through external opening and a drainage-tube is inserted. The result is almost immediate and is permanent. As the abscess cavity heals, a smaller and shorter tube may replace the one first introduced.

This is the operation advised by Prof. Chiène, who claims more perfect antiseptis for it than is possible in oral incision.

TREATMENT OF COMPRESSED FRACTURE OF THE SKULL.

Dr. Brice Clarke gives details of two cases of compound fracture of the skull, in which the fragments were carefully replaced in situ and became firmly reunited. One of the patients was a plate-layer, who had an extensive fracture of the frontal bone caused by the buffer of an engine. The other was a girl whose parietal bone was fractured by a flower-pot falling from a considerable height upon her skull. In both cases the wounds and the bone fragments were carefully cleansed, and the fragments firmly wedged back into place. In both, union was absolutely firm six months later and remained so up to the present time, more than a year after the accident, nor was it now possible to detect any signs of fracture in either case. Great stress was laid upon the necessity of wedging the bones firmly back in their exact relative positions so as to insure accurate apposition of the fragments. Mr. A. Lane said that after trephining, if the bone were replaced it would unite. W. H. Bennet mentioned a case in which he had replaced a two inch trephine circle of bone with perfect success, and this instance was by no means unique. Dr. Clark in reply said, that, so far as he had been enabled to ascertain, it was not unusual for replaced circles of trephined bone to unite. He said it did not seem to be generally known that if pieces of bone were all put back in their proper places, they were very likely to unite.—*The Lancet*, Oct. 17, 1891.

ANTISEPTIC SYMPHECTOMY.

Spinelli (*Ann. de Gynéc. et d'Obstét.*) maintains the results of Sigault's operation, performed with antiseptic precautions, have been constantly favorable for the mothers, and that the children run no risk through the essential features of the procedure itself, the dangers which they incur being solely due to the manœuvres needed for extraction. He describes 24 cases where the symphysis pubis was divided during labor: 12 were performed in the clinical department of the Hospital for Incurables, and 7 in private. All pelvic measurements are given. All the 24 mothers and 23 of the children were saved. The 1 child which was lost was delivered by turning, and was born asphyxiated. It was revived, but died in twelve hours. He concludes that a well-developed foetus, at term can, after division of the symphysis, be delivered through a contracted pelvis of which the true conjugate is but two and one-half inches, a measurement for which, at present, embryotomy or Cæsarian section is almost universally practiced. Provided that strict antiseptis is enforced, the mother suffers no permanent damage. The divided ossa pubis unite by first intention.—*The British Medical Journal*, February 13, 1892, suppl., p. 27.

OBSTETRICS.

DECIDUO-SARCOMA OF PLACENTA.

E. Blanc (*Bull. et Méd. de la Soc. Obstét. et Gynéc. de Paris*, December, 1891) reports a case in which a woman aborted at the fifth month. The placenta did not follow the ovum, and the midwife tore off the cord in attempting its extraction. A physician was called in, and he found the cervix closed. Alarming symptoms set in, and on the third day after abortion the patient was sent into a lying-in hospital at Lyons. Rigors had occurred, and the temperature rose to over 102°. There was no flooding, and the patient's general condition was good. The fundus rose to about three fingers' breadth above the pubes. The cervix was long, rather soft, and hardly permeable to the finger. The vagina was carefully disinfected, the patient placed under chloroform, and the uterine cavity explored. The placenta was very adherent, it lay in the right half of the uterus, and was only ex-

tracted in part. No hæmorrhage followed, and the uterus was washed out with an antiseptic. On the next day the temperature remained high. With great difficulty the rest of the placenta was removed. The surface of the uterine walls to which it was attached felt rough and dense, as though aponeurotic. The patient rapidly recovered. On careful examination the placenta was found to be subject to deciduo-sarcoma, as described by Chiari and Sänger. This diagnosis greatly modified the prognosis of the case, which did well after the entire removal of the membranes; in several other instances a trace of tissue left behind has formed a tumor. The patient, who had once been delivered normally, had not suffered from any affection which might explain the morbid condition of the placenta.—*Brit. Med. Jour.*

THE RESULTS OF TWO HUNDRED LABORS WITHOUT INTERNAL DISINFECTION.

Mermann has continued in the clinic at Mannheim his usage in conducting labors without internal disinfection, and records in the *Centralblatt für Gynäkologie*, 1892, No. 11, the results of 200 recent cases. He had but one death, and that from rupture of the uterus complicated by placenta prævia and a large amount of amniotic liquid. In the two hundred cases there were 36 which presented complications of greater or less gravity. These cases complete a series of 700, presenting no death from septic infection. The morbidity rate was 6 per cent. In the last 200 cases there occurred but 2 cases of mild ophthalmia, and in all less than 10 cases of conjunctivitis were observed among infants. Mermann's practice is to omit injections, and, whenever possible, to also omit internal examinations, relying upon palpation and auscultation and a close observation of the case.—*Amer. Jour. Med. Sc.*

RAPID INDUCTION OF ABORTION BY THE CURETTE.

Doléris (*Annales de Gynéc.*, March, 1892) read a paper on this proceeding at a recent meeting of the Obstetrical Society of Paris. A young married woman, subject to advanced aortic disease from childhood, became pregnant, and as was expected, the gravest symptoms developed

from the first: dyspnoea, rapid hypertrophy and displacement of the heart, insomnia, and alarming syncope during vomiting. At the end of two months the patient was very cachectic. Immediate induction of labor seemed necessary as there was, over and above the symptoms just noted, great anæmia. The os was dilated with laminaria tents, and the gravid uterus scraped with the curette. In less than thirty-six hours abortion occurred, and the patient recovered and did well. In the discussion on Doléris's case, it was observed that statistics proved how severe heart disease did not necessarily affect the prognosis of pregnancy so very gravely. M. Guéniot mentioned three cases in which women with organic disease of the heart bore their children to term in repeated pregnancies without any marked aggravation of the cardiac affection. Dr. Porak believed that the great point of importance in these cases was the state of the endocardium.—*Brit. Med. Jour.*

RUPTURE OF THE UTERUS.

Dr. Schnltz, of Budapest, presents (*Orvosi Hetilap*) the following statistical information: (1) Complete ruptures without treatment, 60 cases giving 20.2 per cent. recoveries; (2) complete ruptures treated with drainage or tampons, 70 cases with 36 per cent. of recoveries; (3) complete ruptures treated by laparotomy, 193 cases with 44.7 per cent. of recoveries.

After enumerating the advantages of laparotomy in this class of cases, Schultz recommends that in every case where it is possible to make a positive diagnosis of complete rupture of the uterus the abdomen should be opened. If the tear is much contused and not suitable for suture, or if myomata are present, or the endometrium is already infected, hysterectomy is to be performed; otherwise, the abdominal cavity is to be emptied and the tear sewed up. Subperitoneal pockets remaining in the parametrium or vaginal vault should be drained.

Incomplete ruptures should be tamponed with iodoform gauze or wicking, or drained by means of a glass tube. A flannel bandage is firmly applied to the abdomen; the treatment is in other respects like that after a laparotomy. If the conditions for laparotomy are unfavorable in cases of complete tear, the child should be extracted per

vaginam and a tampon inserted.—*Internationale Klinische Rundschau*, January 10, 1892.

RETROFLEXION AND RETROVERSION IN PREGNANCY.

Chrobak (*Centralbl. f. Gynäk.*, No. 7, 1892) maintains that these conditions, so far from being unusually associated and therefore amenable to the same treatment, are clinically and pathologically distinct. He endeavors to show that the relations of the uterus, and the mechanism of its muscular apparatus and ligaments, favor spontaneous reduction of a retroflexion in pregnancy. He even believes that he has never known a case of uncomplicated retroflexion where manual reduction was absolutely needed. He has reduced a great many retroflexed gravid uteri, either to relieve pain or difficulty in defecation or simply because a displacement being discovered he naturally rectified it. Far more frequently he has done nothing, and spontaneous reduction has followed. The case of retroversion is quite otherwise. If a retroversion be not replaced by the hand, abortion, under very unfavorable circumstances, or incarceration, will inevitably ensue. The fundus grows larger and the cervix becomes more and more elevated, and recedes from the symphysis as the pregnancy advances. Spontaneous reduction is an impossibility under the circumstances, and it is the duty of the obstetrician to interfere.—*Brit. Med. Jour.*

HYMEN OBSTRUCTING LABOR.

I recently attended Mrs. F., a healthy primipara, aged about 22. The head was distending the perineum, but on examination I found I could not, as usual, sweep the examining finger around the head, and there was evidently something obstructing it. Puzzled to know the meaning of this I exposed the patient, and found the hymen tightly stretched over the head, like the skin of a drum. I at once proceeded to divide it, but while I was doing so the child was shot suddenly into the world, unfortunately rupturing the perineum. Playfair states that such cases are rare. For this reason, and to warn others against the accident which befell me, the case seems worth recording.—J. CUTHBERTSON WALKER, in *Brit. Med. Jour.*

GYNECOLOGY.

A MODIFIED HYSTERORRAPHY.

In a review of Vaton's work, "*Etude comparative des differents traitements du prolapsus uteri*" by Luke, of Königsberg, the following description of the former's modification of Caneva's method of fixing the displaced uterus to the anterior abdominal wall is given: The abdominal wall is incised in the median line until the peritoneum is reached. The latter is now loosened from the posterior wall of the previously distended bladder with the right index finger, the left hand keeping back the coils of intestine. According to Vaton, whose trials of the method were made upon the cadaver, this can be accomplished without difficulty. The peritoneum is now easily loosened from the anterior surface of the uterus; the bladder is now emptied. The uterus is now fixed either by sutures or Muznux's forceps, drawn toward the abdominal wall, and both sides of its anterior wall are secured, as a preliminary step, to the anterior surface of the peritoneum. A thread is then led through the abdominal muscles of the left side, which grasping the anterior surface of the uterus, passes out through the right side of the abdominal wall. A similar fixation suture is established about 1 cm. below the first. The sutures are now firmly tied and the abdominal wound closed.—*Centralbl. f. Chirg.*, 1890, No. 42.

PUERPERAL HÆMATOMA UNDER DOUGLAS'S POUCH.

Ter-Grigorianz (*Centralblatt f. Gynäk.*, September 12th, 1891) records a case in which a woman, aged 24, who married at the age of 18, had two normal pregnancies, and had been delivered at term a third time. She was four days in labor, and the child, very bulky, died at birth. After delivery the patient remained unconscious for three days, and then suffered for a week from diarrhoea. Two months later a bloody discharge of a faint odor came away from the vagina. The tip of the forefinger could be passed into a round sharp-bordered opening in the upper part of the vagina. To the left of the aperture and at the same level was a normal cervix; the uterus, not enlarged, was anteverted, and the fundus was directed towards the

horizontal ramus of the left pubes. A firm mass filled the right side of the pelvic cavity; it extended downwards, but hardly passed to the left of the middle line at any point. The surface of the mass was smooth and felt as though continuous with the pelvic walls. Ter-Grigorianz washed out the opening in the vagina with a 4 per cent. solution of carbolic acid. Quantities of very fetid broken-down clot came away. After daily syringing for six days hardly any more clot escaped, but stinking pus was discharged. At the end of a fortnight the injected carbolic solution came away almost clear and quite odorless. The mass, during this treatment, gradually disappeared. Douglas's fold sank low in the pelvis, the uterus assumed its normal position, and the opening lay in the posterior vaginal wall immediately below the cervix. Hæmorrhage had clearly occurred under Douglas's pouch after labor, and the pressure of the clot had caused the vagina to slough.—*Brit. Med. Jour.*

HYSTERECTOMY FOR CARCINOMA OF THE UTERUS.

Braithwaite (*British Medical Journal*, No. 1624, p. 329) reports the results in twelve cases of carcinoma of the uterus treated by complete vaginal hysterectomy and in four treated by supra-vaginal hysterectomy. Of the first group, three were living and free from recurrence of the disease at the time of report, four years, eighteen months, and ten months, respectively, after operation; one was living, free from disease, four and a half years after operation, but had been lost to observation for a year and a half; one died two years after operation, without recurrence of the disease; in two cases the uterus was profoundly involved, and death followed the operation in six months and a few months, respectively; in four cases there was fatal recurrence; four months, three months, ten weeks, and soon, respectively, after operation; one case died from acute suppurative peritonitis following the operation. Of the four cases in which supra-vaginal hysterectomy was performed, one was free from recurrence nearly five years after the operation; in two the disease recurring in seven months and two months respectively; one case died twelve hours after the operation from shock and hæmorrhage.—*News.*

A COLOSSAL FIBRO-CYSTOMA OF THE OVARY.

Dr. Peters makes the following record: The patient, a woman æt. 40, whose last delivery was 20 year before, and who in the course of 5 years had aborted twice, noticed for 13 years a slow increase in the circumference of her abdomen. Disturbances of defecation and urination had appeared 2 years since. The patient's appetite was variable, she having at times morbid cravings.

During the last year she suffered from pains in the back, swelling of the legs, sleeplessness and loss of appetite: The greatest circumference of her belly, somewhat below the navel, was 145.5 cm.; between the xiphoid cartilage and the pubes the distance was 81 cm. The operation necessitated an incision 60 cm. long. The removed tumor consisted of the left ovary. It was a fibro-cystoma, 38-50 cm. in diameter (in different places) and weighed 37 kilogrammes (about 81 pounds.) Recovery took place without any disturbance. The patient is obliged to support the superfluous abdominal skin by a binder.—*Oeekb. van het Node. Tsjdsch. voor Geneesk.* 1890, I No. 2.

SUPERNUMERARY OVARY AND TUBE.

E. Falck (*Centralbl. f. Gynäk.*, No. 44, 1891) publishes a case of very unusual anomaly. A multipara, aged 37, suffered for about ten weeks from pains in the sacral region, right side, and right leg. The period came on fourteen days before it was due, and lasted rather longer than usual. Behind the uterus a freely movable tumor, about the size of an apple, was found. Abdominal section was performed; the tumor was easily removed. On its upper aspect lay a long cord-like structure, half the thickness of a man's finger. The tumor had no connection with the genitals, but was attached to the omentum, from which it was separated. Both ovaries—still small but subject to cystic degeneration—were removed. Falck declares that the right and left appendages were then seen to be normal in every other respect. The tumor, which was filled with a substance like soft pitch, was found to consist of the middle of a dilated tube. A piece of distinct tissue flattened on its surface proved to be the remains of an ovary and tube near corresponding appendages.

normally attached to the uterus. Falck gives a short account of cases of supernumerary Fallopian tubes, already published, and of accessory ovaries. The last-named anomaly is of a different character from that under consideration, which implies some disturbance in development at a very early stage of embryonic life.—*Brit. Med. Jour.*

PEDIATRICS.

AN INTERESTING CASE OF TOO EARLY DEVELOPMENT OF THE SEXUAL ORGANS IN A CHILD.

At a late meeting of the Paris Academy of Medicine, M. Crivelli (*Wiener Klin. Wochenschrift*, July 24, 1890,) showed the photograph of an eighteen-months'-old girl whose genital organs presented a degree of development such as is usually found at the age of eighteen. The mammae and the nipples were also well developed; the mons veneris covered with lanugo, the clitoris being also very large. By investigation, Crivelli found out that the child was addicted to masturbation. The menses had appeared regularly since three months, and lasted from three to four days. Before the appearance of the menses the child feels sick for about twenty-four hours.

CONGENITAL RICKETS.

Mr. Gilbert Barling, surgeon to the General Hospital, Birmingham, records a case illustrating true rickets arising in the fœtus without the association of the cretinoid condition. The patient, aged six months, was the second child of a young healthy mother, who had influenza during the second month of her pregnancy. Directly after birth, and ever since, the child had been subject to profound sweating, especially during sleep, as also to bronchial and intestinal catarrh. The hair is dark and abundant, the anterior fontanelle is very large, and the frontal eminences are very marked; otherwise the head is well shaped. A week after birth the right humerus broke spontaneously; three weeks later the left leg bones also broke; and a fortnight later the left humerus; but all these bones have united again. Ever since birth the thigh and big bones of both extremities have been noticed to be unusually curved forwards and outwards, and there is shortening of the left

femur, with thickening at the upper part, which indicates that it has been fractured; probably this happened before birth. There is no nodulation at the junction of the ribs with their cartilages, nor is there enlargement of the epiphyses. There is no mental dullness, such as cretins show; on the contrary, the child is unusually bright and intelligent, laughing and noticing objects around it. There were no signs of the cretinoid state.—*The Birmingham Med. Review*, p. 107, February, 1892.

ON RELAPSE, OR RECRUDESCENCE IN SCARLET FEVER; TWO CASES, WITH A NOTE ON THE LITERATURE OF THE SUBJECT.

Boddie (*Edinburgh Medical Journal*, October, 1891) says: A true relapse in scarlet fever as opposed to recurrence is comparatively rare. The two cases reported are unquestionably examples of relapse. The first patient was a boy of fourteen years. He passed through an ordinary attack of scarlet fever, followed by desquamation and albuminuria, and had apparently recovered when on the thirty-seventh day, after exposure to cold and wet, his temperature rose and he developed all the symptoms of scarlet fever. The illness continued six days and was followed by more marked desquamation than after the first attack.

The second patient was a boy of nine years, who passed through a typical attack of scarlet fever, followed by desquamation and albuminuria. On the twenty-seventh day the symptoms suddenly returned and continued five days and were followed by partial desquamation.

The review upon the literature of the subject is quite complete.

IODOFORM AS A PROPHYLACTIC OF OPHTHALMIA NEONATORUM.

Dr. Valude (*Annales d'Oculistique—Merck's Bulletin*, December, 1891.) has published the results he obtained in the clinics of Dr. Bar and Professor Tarnier, in Paris, from the systematic employment of finely powdered iodoform as an application to the eyes of newborn babes. These results compare favorably with those obtained under similar conditions in the same wards by Dr. Crédé from silver nitrate.

The author recommends the eyelids to be carefully cleansed, and powdered iodoform dusted into the conjunctival sac as soon as the child is born—before the cord has been severed. As an advantage of this treatment it is claimed that the powder, or some of it, at least, *remains* in the folds of the conjunctiva *for a considerable time* after the application; whereas solutions of any kind immediately drain away.

Dr. Valude believes that iodoform will prove more useful than silver nitrate in the hands of *midwives*, because it can be more easily applied, and does not decompose—as the solutions of the silver-salt do, even when such precautions as preserving in dark bottles, etc., are taken.

CRANIOTOMY IN MICROCEPHALI AND IN UNDEVELOPED CHILDREN.

Lannelougue (*Gaz. des Hôpitaux*, 1891, No. 39), has performed craniotomy twenty-five times in microcephalic individuals and the imperfectly developed. He found in microcephalic skulls evidences of premature ossification of the sutures and diminished area of the fontanelles. Other observers have mentioned, as other operable causes of idiocy, injuries occurring during birth, notably compression of the skull, meningeal hæmorrhage of the convexity, leading to hæmatoma, circumscribed pachymeningitis and formation of cysts; and finally hyperostoses of syphilitic origin and general thickening of the bony vault of the skull. In the operation he has employed two different methods, the one consisting of linear and the other of flat incision. He now prefers the latter. Large portions of bone, either the shape of a V, of a rectangle, or of a T, are removed, the periosteum and skin flaps being then re-united, the area of bone measuring from eight to twelve millimetres. The operation lasted from forty to forty-five minutes. He does not think it necessary to remove the periosteum, basing this upon an observation of two children operated upon who died two months afterwards of croup. In these cases not a trace of bony regeneration was found. The ages of the children operated upon varied from eight months to twelve years. The operation was successful in twenty-four out of twenty-five cases; one ended fatally from sepsis. In three other

cases slight suppuration occurred. In the majority of cases both intelligence and gait were improved.

HYGIENE.

"ELIMINATION OF MICRO-ORGANISMS BY THE SWEAT."

Under the above title a short paper appears in *L'Union Médicale* for March 3rd of this year. It commences by stating that it is still an unsettled question as to whether micro-organisms are able to pass through certain vessels and organs, and then be eliminated by means of the kidneys or intestinal canal, when these organs are in themselves perfectly unaffected and in a healthy condition. According to some authorities, among whom is Wysokowitch, such an event can only occur when there is a sanguineous exudation, or the tissues of the kidneys or intestine are diseased. Some observers, on the other hand, deny that such conditions are necessary. Thus Trambusti and Maffucci maintain that they have found anthrax bacilli in the urine and bile when no disease whatever could be found in the kidneys and liver. Baumgarten, again, states that he has seen tubercle bacilli pass from the blood into the tissues when the walls of the vessels were quite healthy. From other authorities we learn, on well-established evidence, that pathogenic micro-organisms can pass into the milk when the mammary glands are unaffected. Brunner* investigated this matter from another side, and demonstrated the fact that pathogenic microbes could be eliminated by means of the sweat. This investigation was met with a great difficulty from the outset—namely, that it is not easy to sterilize the skin so as to be sure that the micro-organisms which were found in the secretion, and cultivated in artificial media, were derived from the tissues and fluids of the body; and not from its cutaneous surface. This difficulty was overcome by using animals for experiments which had been inoculated with disease, the pathogenic organism of which could not accidentally have found its way on to the skin. The animal was then made to perspire profusely by artificial means, pilocarpine being usually employed for this purpose, and then further inoculation and

*Berlin. Klin. Wochenschrift, May 25th, 1891.

cultivation experiments were made with the sweat. Proceeding in this way, Brunner injected a culture of staphylococcus aureus into a hog, one of anthrax into a cat, and one of micrococcus prodigiosus into a sucking-pig. In all three cases the microbes injected were found in the sweat, and also in the saliva. This is an important discovery, from both practical and theoretical points of view. It gives to crises, accompanied by profuse perspirations, which may be produced artificially or occur naturally, a still more important place than they formerly held. It also demonstrates that there may be great danger in allowing a patient who has been sweating profusely to possibly reabsorb the secretion, and that therefore it is a good plan to employ moderate friction with dry cloths when such a crisis occurs, and to subject all linen and clothing capable of absorbing the sweat to immediate disinfection. Another precaution which the investigation indicates is that when an abscess is discharging externally, or when a patient is suffering from erysipelas or other infectious cutaneous affection, there is great danger to the patient himself if the linen etc. are not changed after profuse sweats, as the micro-organisms may possibly be absorbed by the skin. It is singular, however, that several observers (including Mattei, Surmont, and Lile) have failed, after numerous attempts, to find tubercle bacilli in the sweat of phthisical patients; so numerous have such trials been that we may almost consider it as absolutely proved that such migration of the bacilli does not occur.—*Lancet*.

ALCOHOLISM AND TUBERCULOSIS.

Dr. Hector W. G. Mackenzie, assistant physician to the Brompton Hospital for Consumptives, is of opinion that tuberculosis is much more common among those addicted to alcohol than is generally believed. He says that his experience among the out-patients at the Brompton Hospital is that a considerable portion of the phthisical—especially of the men—have been alcoholic, and that a history of alcoholism is a very common antecedent in those cases where there is no inherited susceptibility to tubercle. As regards women, it is impossible to say to what extent alcohol is responsible for the disease, it being very uncommon for a woman to

own to alcoholic habits. He finds that in alcoholic cases the condition of the patient is generally worse than would be expected from the amount of disease revealed by physical examination. It is therefore specially important in such cases, when there are any chest symptoms, to examine the sputum for bacilli. By this means he has been able to make an early diagnosis of phthisis when the examination of the chest was negative. In alcoholic cases the progress of the disease, as a rule, is rapid, and the prognosis particularly unfavorable. Dr. Mackenzie does not offer an explanation why many drunkards develop phthisis. Our observation leads us to the conclusion that in the majority of cases of phthisis in inebriates the patients have endeavored to live on alcoholics in lieu of food. Everyone admits the importance of malnutrition as a factor in the causation of tuberculosis, and it is not a matter for surprise that drunkards who habitually neglect their food frequently die of phthisis.—*Hospital Gazette*.

FISH DIET AND LEPROSY.

Dr. August Crane, lately Government Physician in Hawaii, writes as follows to a contemporary on the subject of fish diet and leprosy:—"From time immemorial the staple food of the native Hawaiians had been fish, and principally raw fish. Until about 1860, there is no history nor tradition of the existence of leprosy among them. At about this date it appeared, and at the time of its appearance, white people had been among them for forty years, and their food and methods of living had greatly changed. Canned foods, fresh meat, and vegetables had been so widely introduced that the use of fish, and especially raw fish, had enormously decreased, and could not be considered as a prominent feature of their diet. At the present day, while consuming no remarkable amount of sea food, one Kanaka out of thirty is a leper. All fish, no leprosy; little fish, much leprosy. This has been the history in Hawaii." These statements above expressed appear to be a formidable indictment against the theory that fish diet and leprosy stand in the relation of cause and effect. But the advocates in favor of the theory are now few and far between, despite the powerful authority of Mr. Jonathan Hutchinson.—*Med. Press*.

OBESITY.

A French journal recommends a mode of dieting for curing obesity, which is attributed to an army doctor. A colonel, who was threatened to be retired from the army, as he was so heavy that it required two men to lift him into the saddle, became thin in a few weeks, and to such extent that he had to take means to recover what he had lost. The means consisted simply in not eating more than *one* dish at any meal. It is said by doing this the stomach never takes too much. Nevertheless nothing but the one dish should be taken; no condiments or soups or supplementary dessert should be allowed.

MEDICAL CHEMISTRY.

THE REACTION OF URINE WITH ETHER.

Dr. Andrew H. Smith, writes in the *Lancet*: If a specimen of urine, taken promiscuously, be thoroughly agitated in a test-tube with half its bulk of pure sulphuric ether, there will result in most instances an abundant white foam. If now the tube be corked and set aside, this foam rises to the surface and gradually condenses into a greyish gelatinous plug, so firm, it may be, that the tube can be turned upside down without disturbing its contents. In another smaller proportion of cases no foam will result from the agitation, and the ether will immediately separate from the urine and form a clear layer above it. In some instances a second prolonged agitation after the lapse of a few moments will produce the reaction described. In other cases it may be obtained by adding a few drops of acetic acid and shaking the tube again very thoroughly. It will always be noticed that when the reaction occurs the fluid begins to clear first at the bottom, and the clearing progresses upward. When the reaction does not take place the order is reversed, a clear layer of ether appearing first at the top. Pending a thorough chemical investigation as to the nature of the substance thus separated from the urine, I find that the reaction occurs in urine which does not respond to any of the tests for albumen or for peptones. It occurs also in urine from which the phosphates have been removed, and it cannot be obtained

with simple solutions of urea or of the urates. It is most abundant in the urine of those who have a good appetite and good digestion, and is usually absent after long fasting, or when the diet is greatly restricted. From these facts it seems probable that it represents an excess of nutritive material taken into the blood and thrown off by the kidneys, and not a product of disassimilation. Albuminous urine responds to the test in the same way and under the same conditions as normal urine, but if the patient is on restricted diet and the urine does not react to the test, it can be made to do so by adding nitric acid and filtering out the resulting precipitate. A portion of the albumen is redissolved by the acid, and at the time so modified that it is acted upon by the ether. This is shown by the fact that if the albumen be removed by heat and filtration before the acid is added, the reaction cannot be produced; but if a drop or two of acid be placed upon the filter, the filtrate immediately responds to the test. The same effect may be produced by acid spontaneously generated in the urine, so that a specimen of albuminous urine which will not show the reaction while fresh may do so after the acid fermentation has progressed for twenty-four or forty-eight hours.

It is possible that the presence of this material in the urine, and its peculiar reaction with ether, may explain some cases of anuria after prolonged etherization. The ether being eliminated by the kidneys and mixing intimately with the urine in the tubules, affords all the necessary conditions for plugging the latter with gelatinous material, too firm to be displaced, suspension of function necessarily following. Until we know more of the possible reactions of this substance, it will be well to receive with caution the results of some of the more "delicate" tests supposed to detect the presence of minute proportions of albumen.

SYNTHETIC TARTARIC ACID.

M. Genouresse has discovered a simple way of preparing tartaric acid synthetically. He starts with glyoxalic acid ($\text{CHO} \cdot \text{CO}_2\text{H}$), (the acid peculiar to gooseberries, grapes, and similar fruits, and acting upon it with nascent hydrogen liberated by the action of acetic acid upon

zinc dust in contact with glyoxalic acid, the result is that 2 molecules of the latter acid are joined together by 2 hydrogen atoms, and that union gives tartaric acid, or rather the optically inactive form of it known as racemic acid, there being apparently equal molecules of the dextro and laevo varieties produced. The product was separated and examined. This new synthesis of tartaric acid would appear to throw some light upon the natural formation of tartaric acid; for, remembering the close relationship between glyoxalic and oxalic acids, which latter is one of the most readily formed in vegetable tissues, and the reducing agencies which appear to be connected with chlorophyll, we have all the means at hand to account for the natural synthesis of tartaric acid.—*Paris Correspondent of Chem. and Drugg.*

NEWS AND MISCELLANY.

VACCINATION IN AUSTRIA.

The Superior Sanitary Council of Austria has under consideration the details of a new vaccination law. This measure not only provides that every child shall be vaccinated in the first year of life, but that re-vaccination shall be compulsory before the school age is reached. Only animal lymph which has been prepared in institutions under State control is to be used.—*Brit. Med. Jour.*

A NEW CHAIR OF ORTHOPEDICS AT THE PHILADELPHIA POLYCLINIC.

At the last meeting of the Board of Trustees of the Philadelphia Polyclinic and College for Graduates in Medicine, an additional Chair of Orthopedics was created, and Dr. Benjamin Lee was elected Professor of Orthopedics. Dr. Lee is President of the American Orthopedic Association, Secretary of the State Board of Health of Pennsylvania, and has been a voluminous contributor to the Medical Journals, upon orthopedic subjects.

Among the many subjects he has enriched by his labors, are the use of "Suspension in Pott's Disease" and the "Gymnastic Treatment of Deformities." The addition of Dr. Lee will greatly increase the facilities, at the Polyclinic Hospital, for the modern and scientific treatment of deformities for which it has already acquired a distinct reputation, and which the Trustees now desire to increase by the addition of this new member of the Faculty.

DAMAGES FOR LOST GRAFTS.

A novel action for damages is reported to be pending somewhere in the German Empire under some what curious circumstances. A nurse allowed skin grafts to be snipped from her lily white arm in deference to the wishes of the patient and the request of the surgeon. Unfortunately, the wound did not heal, as might have been anticipated, but proved the starting point of a cellulitis, causing great suffering, permanent disfigurement, and some loss of function. The nurse consequently feels aggrieved, and claims damages from the surgeon.—*Medical Press.*

MANAGEMENT OF HOSPITALS AT NORTH BROTHER ISLAND.

At the meeting of the Board of Health held April 12th, the following resolution was adopted: "*Resolved*—That upon due consideration of the testimony taken at an investigation in respect to the management of Dr. F. R. Percival, of the Riverside Hospital, at North Brother Island, in connection with typhus fever cases, this Board concludes that the persons sick with typhus fever have been properly treated and cared for, and that no further action is necessary in the premises at present." Soon after the investigation referred to was commenced, Dr. Percival was removed from the charge of the typhus fever cases and transferred to the charge of patients ill with other contagious diseases at North Brother Island, and he is still on duty in the latter position.